

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO

THE UNITED STATES OF AMERICA,
THE STATE OF OKLAHOMA,
THE COMMONWEALTH OF PENNSYLVANIA,
PENNSYLVANIA DEPARTMENT OF
ENVIRONMENTAL PROTECTION,
AND THE STATE OF WEST VIRGINIA,

Plaintiffs,

v.

Civil Action No. 3:18-cv-2526

MPLX LP,
MARKWEST LIBERTY MIDSTREAM &
RESOURCES, L.L.C.,
MARKWEST LIBERTY BLUESTONE, L.L.C.,
MARKWEST HYDROCARBON, L.L.C.,
MARKWEST OHIO FRACTIONATION
COMPANY, L.L.C.,
MARKWEST UTICA EMG, L.L.C.,
OHIO CONDENSATE COMPANY, L.L.C.,
MARKWEST OKLAHOMA GAS
COMPANY, L.L.C.,
MARKWEST BUFFALO CREEK GAS
COMPANY, L.L.C.,
MARKWEST JAVELINA COMPANY, L.L.C.,
MARKWEST ENERGY EAST TEXAS GAS
COMPANY, L.L.C., AND
MARKWEST ENERGY WEST TEXAS GAS
COMPANY, L.L.C.,

Defendants.

CONSENT DECREE

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WHEREAS, Plaintiff the United States of America (“United States”), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the United States Environmental Protection Agency (“EPA”), has simultaneously filed a complaint under the Clean Air Act (“CAA”), 42 U.S.C. § 7401 et seq. (“the Complaint”), and lodged this Consent Decree against defendants MPLX LP, MarkWest Liberty Midstream & Resources, L.L.C., MarkWest Liberty Bluestone, L.L.C., MarkWest Hydrocarbon, L.L.C., MarkWest Ohio Fractionation Company, L.L.C., MarkWest Utica EMG, L.L.C., Ohio Condensate Company, L.L.C., MarkWest Oklahoma Gas Company, L.L.C., MarkWest Buffalo Creek Gas Company, L.L.C., MarkWest Javelina Company, L.L.C., MarkWest East Texas Gas Company, L.L.C., and MarkWest Energy Texas Gas Company, L.L.C. (“Defendants”) for alleged environmental violations at one or more of their natural gas processing plants;

WHEREAS, Defendants have natural gas processing plants located in Washington County, Pennsylvania; Evans City, Pennsylvania; Dallas, West Virginia; Smithfield, West Virginia; West Union, West Virginia; Clendenin, West Virginia; Kenova, West Virginia; South Shore, Kentucky; Langley, Kentucky; Pikeville, Kentucky; Jewett, Ohio; Cadiz, Ohio; Summerfield, Ohio; Butler, Oklahoma; Sayre, Oklahoma; Corpus Christi, Texas; Carthage, Texas; and Orla, Texas (the “Covered Facilities”);

WHEREAS, the State of West Virginia, on behalf of the West Virginia Department of Environmental Protection, has joined in this matter alleging violations of applicable state implementation plan (“SIP”) provisions and/or other laws, rules, regulations, and permits incorporating and implementing CAA requirements;

WHEREAS, the Pennsylvania Department of Environmental Protection (“PADEP”), the agency of the Commonwealth of Pennsylvania charged with the implementation and enforcement of the Air Pollution Control Act, 35 P.S. § 4001 et seq., has joined in this matter alleging violations of its applicable SIP provisions and/or other laws, rules, regulations, and permits incorporating and implementing CAA requirements;

WHEREAS, the Oklahoma Department of Environmental Quality, an official agency of the State of Oklahoma to which the Oklahoma Legislature has delegated the power and duty to enforce the Oklahoma Statutes, including the authority to bring actions in courts of competent jurisdiction for violations of the Oklahoma Statutes, Oklahoma’s SIP, and/or other state rules and regulations incorporating and implementing Clean Air Act requirements (see 27A OKLA. STAT. § 2-3-101(B)(2)), has joined in this matter alleging violations of its applicable SIP provisions and/or other laws, rules, regulations, and permits incorporating and implementing CAA requirements;

WHEREAS, the Complaint alleges that MPLX, LP and MarkWest Liberty Midstream & Resources, L.L.C. violated and/or continues to violate at the gas processing plant at their Houston Facility the New Source Performance Standard (“NSPS”) regulations promulgated pursuant to Section 111 of the CAA, 42 U.S.C. § 7411, and found at NSPS General Provisions under 40 C.F.R. Part 60, Subpart A (“Subpart A”); 40 C.F.R. Part 60, Subpart KKK (Standards of Performance for Equipment Leaks of Volatile Organic Compounds From Onshore Natural Gas Processing Plants for which Construction, Reconstruction, or Modification commenced after January 20, 1984, and on or before August 23, 2011) (“Subpart KKK”); Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing

Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006) (“Subpart VV”); Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution) (“Subpart OOOO”); 40 C.F.R. Part 60, Subpart VVa (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006) (“Subpart VVa”); and 40 C.F.R. Part 60, Subpart NNN (Standards of Performance for VOC From Synthetic Organic Chemical Manufacturing Industry Distillation Operations) (“Subpart NNN”);

WHEREAS, the Complaint alleges that MPLX LP and MarkWest Fractionation Company, L.L.C. violated and/or continue to violate at the gas processing plant at their Hopedale Facility 40 C.F.R. Part 60, Subparts A, OOOO, VVa, NNN, and Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984) (“Subpart Kb”); Condition C.2.b.2.a of the October 14, 2014 Permit to Install and Operate No. P0116897; and Ohio Administrative Code 3745-31;

WHEREAS, the Complaint alleges that MPLX LP and MarkWest Utica EMG, L.L.C. violated and/or continue to violate at their Seneca Facility 40 C.F.R. Part 60, Subparts A, OOOO, and VVa;

WHEREAS, Defendants have allegedly violated and/or continue to violate 40 C.F.R. Part 60, Subparts A, KKK, OOOO, VVa, NNN, Kb and/or VV, at the gas processing plants at one or more of the Covered Facilities;

WHEREAS, Defendants have allegedly violated and/or continue to violate 40 C.F.R. Part

60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (“Subpart Db”), and 40 C.F.R. Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (“Subpart Dc”), at heaters located at the gas processing plants at one or more of the Covered Facilities;

WHEREAS, Defendants completed a performance test on November 27 - December 1, 2016, in compliance with 40 C.F.R. Part 60, Subpart OOOO, for their railyard Enclosed Combustion Device located at the Hopedale Facility;

WHEREAS, Defendants have waived any applicable federal or state requirements of statutory notice of the alleged violations;

WHEREAS, Defendants do not admit any liability to the United States, PADEP, the Oklahoma Department of Environmental Quality on behalf of the State of Oklahoma, and the State of West Virginia, on behalf of the West Virginia Department of Environmental Protection (“State Co-Plaintiffs”) arising out of the transactions or occurrences alleged in the Complaint or in this Consent Decree; and

WHEREAS, the United States, the State Co-Plaintiffs, and Defendants recognize, and this Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties, and that this Consent Decree is fair, reasonable, and in the public interest;

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I, and with the consent of the Parties, IT IS HEREBY ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action and over the Parties, pursuant to 28 U.S.C. §§ 1331, 1345, 1355 and 1367, and Section 113(b) of the CAA, 42 U.S.C. § 7413(b). Venue is proper in this judicial district pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b), and 28 U.S.C. §§ 1391(b) and (c), and 1395(a), because violations alleged in the Complaint are alleged to have occurred, and Defendants conduct business, in this judicial district. Defendants consent to and shall not challenge entry of this Consent Decree or this Court's jurisdiction to enter and enforce this Decree, and further consent to venue in this judicial district solely for the purpose of entering and enforcing this Consent Decree. Authority to bring this suit is vested in the United States Department of Justice by 28 U.S.C. §§ 516 and 519 and Section 305 of the CAA, 42 U.S.C. § 7605, and in State Co-Plaintiffs by Section 304 of the CAA, 42 U.S.C. § 7604, Section 4 of the Pennsylvania Air Pollution Control Act (APCA), 35 P.S. § 4004, 27A OKLA. STAT. § 2-3-101(B)(2)), and West Virginia Code §§ 22-5-6 and 22-5-7.

2. For purposes of this Consent Decree, Defendants agree that the Complaint states claims upon which relief may be granted.

3. Notice of the commencement of this action shall be given to the State of Ohio, Commonwealth of Kentucky, State of West Virginia, State of Texas, State of Oklahoma, and the Commonwealth of Pennsylvania, Pennsylvania Department of Environmental Protection as required by Section 113(b) of the CAA, 42 U.S.C. § 7413(b).

II. APPLICABILITY AND SALES OR TRANSFERS OF OWNERSHIP AND OPERATION INTERESTS

4. The obligations of this Consent Decree apply to and are binding upon the United

States, State Co-Plaintiffs, and Defendants, and any of their respective successors or assigns, or other entities or persons otherwise bound by law.

5. In the event that a Defendant proposes to sell or transfer ownership or operation, in whole or in part, of any of the Covered Facilities, to an entity unrelated to a Defendant (“Third Party”), such Defendant shall notify the Third Party in writing of the existence of this Consent Decree prior to the closing of such sale or transfer. Defendant shall send a copy of this written notification to the United States and the Applicable State Co-Plaintiff(s) pursuant to Section IX (Notices) prior to the proposed closing.

6. Defendant shall condition any sale or transfer, in whole or part, of ownership or operation of any of the Covered Facilities upon the execution by the Third Party of a modification to this Consent Decree to make the terms and conditions of this Consent Decree related to the ownership or operation of the transferred Covered Facilities applicable to the Third Party. No earlier than thirty (30) Days after giving notice of a successor in interest pursuant to Paragraph 5, Defendant may file a motion to modify this Consent Decree with the Court to make the terms and conditions of the Consent Decree related to the ownership or operation of the transferred Covered Facilities applicable to the Third Party. Defendant shall be released from the requirements of this Consent Decree with respect to the transferred Covered Facilities unless the Court finds that the Third Party does not have the financial or technical ability to comply with the requirements of this Consent Decree.

7. This Consent Decree shall not be construed to impede the sale or transfer of any asset or interest between Defendant and any Third Party so long as the requirements of this Consent Decree are met.

8. Paragraphs 4-6 shall not be construed to affect or apply to mergers or other corporate transactions in which Defendant is acquired by a Third Party and the surviving entity, by operation of law, assumes all of such Defendant's assets and liabilities pursuant to the Consent Decree relating to the Covered Facilities.

9. Defendants shall: (a) provide a copy of this Consent Decree to all officers of Defendants and managers who will be responsible for implementation of the terms of this Consent Decree, and ensure that any employees and contractors whose duties might reasonably include compliance with any provision of this Consent Decree are made aware of this Consent Decree that fall within such persons' duties; and (b) place an electronic version of the Consent Decree on its internal environmental website. Defendants shall be responsible for ensuring that all employees and contractors involved in performing any work pursuant to this Consent Decree perform such work in compliance with the requirements of this Consent Decree.

10. In any action to enforce this Consent Decree, a Defendant shall not raise as a defense to liability or stipulated penalty the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree. This Section does not preclude a Defendant from holding any employee, agent, or contractor who is alleged to have not complied with this Consent Decree liable for their actions. Nor does this Section preclude a Defendant in an action to enforce this Consent Decree pursuant to Paragraph 146, from raising the failure of any contractor to take any actions necessary to comply with the provisions of this Consent Decree as a mitigating factor with regard to any non-injunctive relief sought.

11. Defendants Responsible for Compliance. The following table identifies the

Defendants responsible for each Covered Facility.

Covered Facility	Defendants Responsible for Compliance with the Consent Decree
Houston, Majorsville, Mobley, and Sherwood	MPLX LP and MarkWest Liberty Midstream & Resources, L.L.C.
Bluestone	MPLX LP and MarkWest Liberty Bluestone, L.L.C.
Siloam, Langley, Boldman, Cobb, and Kenova	MPLX LP and MarkWest Hydrocarbon, L.L.C.
Hopedale	MPLX LP and MarkWest Ohio Fractionation Company, L.L.C.
Cadiz and Seneca	MPLX LP and MarkWest Utica EMG, L.L.C.
Utica Condensate	MPLX LP and Ohio Condensate Company, L.L.C.
Arapaho	MPLX LP and MarkWest Oklahoma Gas Company, L.L.C.
Buffalo Creek	MPLX LP and MarkWest Buffalo Creek Gas Company, L.L.C.
Javelina	MPLX LP and MarkWest Javelina Company, L.L.C.
Carthage	MPLX LP and MarkWest Energy East Texas Gas Company, L.L.C.
Carthage East	MPLX LP and MarkWest Energy East Texas Gas Company, L.L.C.
Hidalgo	MPLX LP and MarkWest Energy West Texas Gas Company, L.L.C.

III. DEFINITIONS

12. The terms used in this Consent Decree that are defined in the CAA or in federal and state regulations promulgated pursuant to the CAA shall have the meaning assigned to them in the CAA or such regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

- a. “Air Defender System” shall mean an oxygen removal and Volatile Organic Compound (“VOC”) recovery system intended to safely capture VOCs displaced from tanker trucks as new hydrocarbons product is loaded. All vapor (except ethane and

methane) is processed and VOC free air is allowed to pass to the atmosphere. Once the truck has finished loading, the captured VOCs are recovered and returned to the site tankage. This process is achieved by utilizing pressure swing adsorption with one or more activated carbon beds. While trucks load out produced liquids, vapors from the truck pass through the carbon and VOCs are captured. Processing of the VOCs is accomplished primarily by vessel evacuation with rotary vane vacuum pumps. By generating a vacuum, the VOCs are revaporized, and deposited into produced liquid tanks at higher concentration. Vapors that condense downstream of the pumps prior to storage are collected by a knockout tank and are piped back to the storage tanks. At the end of the vacuum process, nitrogen or a similar inert gas is used to push the remaining VOCs from the carbon bed and into customer tanks.

b. “Annual” or “annually” shall mean a calendar year, except as otherwise provided in applicable leak detection and repair (“LDAR”) regulations.

c. “Average” shall mean the arithmetic mean.

d. “Bottom Dome Vapor Recovery Piping” shall mean the piping that connects the bottom dome of a pilot to a pressure relief valve of a pilot-operated modulating pressure relief valve.

e. “CAP” shall mean the Corrective Action Plan described in Paragraph 55 of this Consent Decree.

f. “Complaint” shall mean the Complaint filed by the United States and the State Co-Plaintiffs in this action.

g. “Consent Decree” or “Decree” shall mean this Consent Decree and all

appendices attached hereto, but in the event of any conflict between the text of this Consent Decree and any Appendix, the text of this Consent Decree shall control.

h. “Covered Equipment” shall mean all Covered Types of Equipment in all Covered Process Units.

i. “Covered Facilities” shall mean the natural gas processing plants at the following locations:

Houston Facility
800 Western Avenue
Washington, PA 15301

Bluestone Facility
440 Hartman Road
Evans City, PA 16033

Majorsville Facility
1700 Majorsville Road
Dallas, WV 26036

Mobley Facility
14624 North Fork Road
Smithfield, WV 26437

Sherwood Facility
218 Swisher Lane
West Union, WV 26456

Cobb Facility
130 Elk River North
Clendenin, WV 25045

Kenova Facility
50 Big Sandy River Road
Kenova, WV 25530

Siloam Facility
2 MarkWest Drive
South Shore, KY 41175

Langley Facility
72 Maple Street
Langley, KY 41645

Boldman Facility
6072 Hurricane Road
Pikeville, KY 41501

Hopedale Facility
46700 Giacobbi Road
Jewett, OH 43986

Cadiz Facility
43701 Industrial Park Road
Cadiz, OH 43907

Seneca Facility
26645 Zep Road East
Summerfield, OH 43788

Utica Condensate Facility
44200 Cadiz-Steubenville Road
Cadiz, OH 43907

Arapaho Facility
8718 N 2120 Rd.
Butler, OK 73625

Buffalo Creek Facility
13348 North 1770 Road
Sayre, OK 73662

Javelina Facility
5438 Union Street
Corpus Christi, TX 78407

Carthage Facility
356 FM 959
Carthage, TX 75633

Carthage East Facility
1423 County Road 401
Carthage, TX 75633

Hidalgo Facility
40351 FM 3541
Orla, TX 79770

j. “Covered Process Unit” shall mean any process unit that is, or under the terms of this Consent Decree becomes, subject to the equipment leak provisions of 40 C.F.R. Part 60, Subparts KKK (and by reference Subpart VV) or Subpart OOOO (and by reference Subpart VVa).

k. “Covered Types of Equipment” shall mean all valves in light liquid or gas/vapor service, all connectors in light liquid or gas/vapor service, and all pumps in light liquid or gas/vapor service that are regulated under any “equipment leak” provision of 40 C.F.R. Part 60 or any applicable state equipment leak regulation.

l. “Date of Lodging of this Consent Decree” or “Date of Lodging” shall mean the date that the United States files a “Notice of Lodging” of this Consent Decree with the Clerk of this Court for the purpose of providing notice and comment to the public.

m. “Day,” for purposes of requirements uniquely imposed by the LDAR Program under this Consent Decree, and not by any applicable LDAR regulations, shall mean a calendar day. In computing any period of time under this Consent Decree for submittal of reports, where the last Day would fall on a Saturday, Sunday, or federal or state holiday, the period shall include the next Day that is not a Saturday, Sunday, or federal or state holiday. For all other purposes, “Day” shall have the meaning provided in the applicable LDAR regulations.

- n. “Distillation Unit” shall mean a device or vessel in which distillation operations occur, including all associated internals (such as trays or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated recovery system.
- o. “DOR” shall mean Delay of Repair.
- p. “Effective Date” shall have the meaning given in Section XVII (Effective Date).
- q. “Enclosed Combustion Device” shall mean a device (*e.g.*, thermal vapor incinerator, catalytic vapor incinerator, boiler, or process heater) that is designed to reduce the mass content of VOC emissions by 95.0 percent or greater.
- r. “Environmental Mitigation Projects” shall mean the requirements in Paragraphs 69-73 applicable to air-cooled heat exchangers (Fin Fan Units), and in Paragraphs 96-100 (Compressor Stations Mitigation Projects) applicable to natural gas compressor stations, to mitigate the environmental harm allegedly caused by noncompliance at Defendants’ Covered Facilities.
- s. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies. “EPA Regional Office” is the EPA office with jurisdiction over an individual facility listed in definition i. (“Covered Facilities”) at which an action is taken or decision made under this Consent Decree.
- t. “Fin Fan Unit” shall mean an air-cooled heat exchanger.
- u. “Isolation Valve” shall mean a valve that temporarily (or permanently) isolates a part or piece of equipment, correspondingly removing that part or piece from

VOC services.

v. “LDAR” or “Leak Detection and Repair” shall mean the leak detection and repair activities required by any applicable “equipment leak” regulations set forth in 40 C.F.R. Part 60, Subparts KKK, VV, OOOO, and VVa, as well as any applicable state or local equipment leak requirements that require the use of Method 21 or OGI, as applicable to the alternative work practice as specified in 40 C.F.R. § 60.18(g), to monitor for equipment leaks and also require the repair of leaks discovered through such monitoring. “LDAR regulations” shall collectively mean the federal, state and local law, regulations, permit and requirements referenced in this subparagraph.

w. “LDAR Audit Commencement Date” or “Commencement of an LDAR Audit” shall mean the first Day of the on-site inspection that accompanies an LDAR audit.

x. “LDAR Audit Completion Date” or “Completion of an LDAR Audit” shall mean 120 Days after the LDAR Audit Commencement Date.

y. “LDAR Personnel” shall mean all Defendants’ contractors and employees who perform any of the following activities at a Covered Facility: LDAR monitoring; LDAR data input; maintenance of LDAR monitoring devices; leak repairs on equipment subject to LDAR; and/or any other field duties generated by LDAR regulations or the LDAR Program.

z. “LDAR Program” shall mean the Leak Detection and Repair Program specified in Paragraphs 21-58 of this Decree required to come into compliance with 40 C.F.R. Part 60, Subparts KKK, VV, OOOO, and VVa, any applicable state or local

equipment leak requirements, and required measures to mitigate the environmental harm caused by alleged noncompliance at the Covered Process Units and Covered Types of Equipment (including “drill and tap” requirements in Paragraphs 30-32, the “valve replacement and improvement” requirements in Paragraphs 34-43, and the “connector replacement and improvement” requirements in Paragraphs 44-45).

aa. “Low-Emissions Packing” or “Low-E Packing” shall mean either of the following:

- (i) A valve packing product, independent of any specific valve, for which the manufacturer has issued a written warranty that the packing will not emit fugitives at greater than 100 parts per million (ppm), and that, if it does so emit at greater than 100 ppm at any time in the first five years after installation, the manufacturer will replace the product; provided, however, that no packing product shall qualify as “Low-E” by reason of written warranty unless the packing first was tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions; or
- (ii) A valve packing product, independent of any specific valve, that has been tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions, and that, during the test, at no time

leaked at greater than 500 ppm, and on average, leaked at less than 100 ppm.

bb. “Low-Emissions Valve” or “Low-E Valve” shall mean either of the following:

- (i) A valve (including its specific packing assembly or stem sealing component) for which the manufacturer has issued a written warranty that it will not emit fugitives at greater than 100 ppm, and that, if it does so emit at greater than 100 ppm at any time in the first five years after installation, the manufacturer will replace the valve; provided, however, that no valve shall qualify as “Low-E” by reason of written warranty unless the valve (including its specific packing assembly) either:
 - (a) first was tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions; or
 - (b) is an “extension” of another valve that qualified as “Low-E” under Subparagraph i above;or
- (ii) A valve (including its specific packing assembly) that:
 - (a) has been tested by the manufacturer or a qualified testing firm pursuant to generally-accepted good engineering practices for testing fugitive emissions and that, during the

test, at no time leaked at greater than 500 ppm, and on average, leaked at less than 100 ppm; or

(b) is an “extension” of another valve that qualified as “Low-E” under Subparagraph i above.

For purposes of Subparagraphs (i)(b) and (ii)(b), being an “extension of another valve” means that the characteristics of the valve that affect sealing performance (*e.g.*, type of valve, stem motion, tolerances, surface finishes, loading arrangement, and stem and body seal material, design, and construction) are the same or essentially equivalent as between the tested and the untested valve.

cc. “Maintenance Shutdown” shall mean a shutdown of a Covered Process Unit that either is done for the purpose of scheduled maintenance and that lasts longer than 14 calendar Days.

dd. “Method 21” shall mean the test method found at 40 C.F.R. Part 60, Appendix A, Method 21. To the extent that the Covered Equipment is subject to regulations that modify Method 21, those modifications shall be applicable.

ee. “Monthly” shall mean shall mean a calendar month (*i.e.*, January 1-January 31) except as otherwise provided in applicable LDAR regulations.

ff. “Natural Gasoline Storage Vessel” shall mean a storage vessel that stores natural gasoline product.

gg. “Optical Gas Imaging Instrument” or “OGI” shall mean an instrument that images a gas cloud, not visible to the naked eye, and can absorb/emit radiant energy at

the waveband of the infrared camera. The waveband must contain at least the range of 3.3 to 3.4 micrometers.

hh. “Pilot-Operated Modulating Pressure Relief Valve” or “PORV” shall mean a pilot valve (or control pilot) used to control or limit the pressure in a system or which can build up for a process upset, instrument or equipment failure, or fire.

ii. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral.

jj. “Parties” shall mean the United States, the State of Oklahoma, PADEP, the State of West Virginia, and Defendants.

kk. “Pre-existing Tap” shall mean a PORV that contains an existing port on the pressure relief valve allowing for vapor recovery from the bottom dome of the pilot valve (or control pilot) to the process. See Appendix D.

ll. “Process Unit” means equipment assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products as defined in 40 C.F.R. § 60.5430. A Process Unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the products.

mm. “Project Dollars” shall mean Defendants’ direct costs incurred in implementing the Environmental Mitigation Projects identified in Section V and Supplemental Environmental Projects identified in Section VII to the extent that such costs: (i) comply with the requirements set forth in Sections V or VII, as appropriate; and (ii) constitute Defendants’ direct payments for such projects or Defendants’ external costs

for contractors, vendors, and equipment. Project Dollars shall not include Defendants' internal personnel costs incurred to oversee the implementation of the Environmental Mitigation Projects identified in Section V and Supplemental Environmental Projects identified in Section VII.

nn. "Quarter" or "quarterly" shall mean a calendar quarter (January through March, April through June, July through September, October through December) except as otherwise provided in applicable LDAR regulations.

oo. "Repair Verification Monitoring" shall mean the utilization of monitoring (or other method) to be completed by no later than the next calendar Day after each attempt at repair of a leaking piece of equipment in order to determine whether the leak has been eliminated or is below the applicable leak definition in this LDAR Program.

pp. "Screening Value" shall mean the highest emission level that is recorded at each piece of equipment as it is monitored in compliance with Method 21.

qq. "Section" shall mean a portion of this Consent Decree that has a heading identified by a Roman numeral.

rr. "Defendants" shall mean MPLX LP, MarkWest Liberty Midstream & Resources, L.L.C., MarkWest Liberty Bluestone, L.L.C., MarkWest Hydrocarbon, L.L.C., MarkWest Ohio Fractionation Company, LLC, MarkWest Utica EMG, L.L.C., Ohio Condensate Company, L.L.C., MarkWest Oklahoma Gas Company, L.L.C., MarkWest Buffalo Creek Gas Company, L.L.C., MarkWest Javelina Company, L.L.C., MarkWest Energy East Texas Gas Company, L.L.C., and MarkWest Energy West Texas Gas Company, L.L.C.

ss. “State Co-Plaintiffs” shall mean the State of Oklahoma, PADEP, and the State of West Virginia. An “Applicable State Co-Plaintiff” is the State Co-Plaintiff with jurisdiction over an individual facility listed in definition i. (“Covered Facilities”) at which an action is taken or decision made under this Consent Decree.

tt. “Subpart Kb” shall mean 40 C.F.R. Part 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984).

uu. “Subpart KKK” shall mean 40 C.F.R. Part 60, Subpart KKK (Standards of Performance for Equipment Leaks of Volatile Organic Compounds From Onshore Natural Gas Processing Plants for which Construction, Reconstruction, or Modification commenced after January 20, 1984, and on or before August 23, 2011).

vv. “Subpart “NNN” shall mean 40 C.F.R. Part 60, Subpart NNN (Standards of Performance for VOC From Synthetic Organic Chemical Manufacturing Industry Distillation Operations).

ww. “Subpart OOOO” shall mean 40 C.F.R. Part 60, Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification of Reconstruction commenced August 23, 2011, and on or before September 18, 2015).

xx. “Subpart VV” shall mean 40 C.F.R. Part 60 Subpart VV (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals

Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006).

yy. “Subpart VVa” shall mean 40 C.F.R. Part 60, Subpart VVa (Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006).

zz. “Subpart Db” shall mean 40 C.F.R. Part 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

aaa. “Subpart Dc” shall mean 40 C.F.R. Part 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.

bbb. “Subsection” shall mean a portion of a Section of this Consent Decree that has a heading identified by a capital letter.

ccc. “United States” shall mean the United States of America, acting on behalf of EPA.

ddd. “Week” or “weekly” shall mean the standard calendar period, except as otherwise provided in applicable LDAR regulations.

IV. CIVIL PENALTY

13. By no later than 30 Days after the Effective Date of this Consent Decree, Defendants shall pay civil penalties totaling \$925,000 as follows: (i) \$693,751 to the United States; (ii) \$77,083 to the State of Oklahoma; (iii) \$77,083 to PADEP; and (iv) \$77,083 to the State of West Virginia.

14. Payment of the civil penalty to the United States shall be made by Electronic

Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to Defendants by the Financial Litigation Unit of the U.S. Attorney’s Office for the Northern District of Ohio following lodging of the Consent Decree. At the time of payment, Defendants shall send a copy of the EFT authorization form, the EFT transaction record, and a transmittal letter: (i) to the United States in the manner set forth in Section IX of this Decree (Notices), (ii) by email to acctsreceivable.CINWD@epa.gov; and (iii) by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

The transmittal letter shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in United States, et al. v. MPLX LP, et al., and shall reference the civil action number, and DOJ case number 90-5-2-1-11374/1.

15. State Payment Instructions.

a. State of Oklahoma. Defendants’ payment of civil penalty monies to the State of Oklahoma shall be made by check or money order made payable to the Oklahoma Department of Environmental Quality Penalty Fund and delivered to:

Accounts Receivable
Financial and Human Resources Management
Department of Environmental Quality
P.O. Box 2036
Oklahoma City, OK 73101-2036

b. Pennsylvania Payment Instructions. Defendants’ penalty payment to Pennsylvania shall be by a corporate check or the like made payable to the “Commonwealth of Pennsylvania – Clean Air Fund,” and forwarded to:

Chief, Division of Compliance and Enforcement
Pennsylvania Department of Environmental Protection

Bureau of Air Quality
400 Market St.
P.O. Box 8468
Harrisburg, PA 17105-8468

c. State of West Virginia. Payment to the State of West Virginia shall be made by check made out to “Air Pollution Education and Environment Fund” and shall be mailed to:

Air Pollution Education and Environment Fund
West Virginia Division of Air Quality
Attn: Director
601 57th Street SE
Charleston, WV 25304

16. If any portion of the civil penalty due to the United States is not paid when due, Defendants shall pay interest on the amount past due, accruing from the Effective Date through the date of payment, at the rate specified in 28 U.S.C. § 1961. Interest payment under this Paragraph shall be in addition to any stipulated penalty due.

17. Not Tax Deductible. Defendants shall not deduct any penalties paid under this Section or Section XI (Stipulated Penalties) in calculating their federal, state, or local income tax.

18. Upon the Effective Date, this Consent Decree shall constitute an enforceable judgment for purposes of post-judgment collection in accordance with Federal Rule of Civil Procedure 69, the Federal Debt Collection Procedure Act, 28 U.S.C. §§ 3001-3308, and other applicable federal authority. The United States and State Co-Plaintiffs shall be deemed judgment creditors for purposes of collecting any unpaid amounts of the civil and stipulated penalties and Interest.

V. INJUNCTIVE RELIEF

A. Subpart KKK and Subpart OOOO Applicability to Process Units

19. NSPS and Covered Process Units Applicability.

a. All Process Units at the following Covered Facilities are subject to Subpart OOOO upon the Effective Date: Houston Facility; Bluestone Facility; Mobley Facility; Sherwood Facility; Hopedale Facility; Cadiz Facility; Seneca Facility; Utica Condensate Facility; Buffalo Creek Facility; Carthage East Facility; and Hidalgo Facility.

b. By no later than one year after the Effective Date, all Process Units at the Cobb, Kenova, Langley, Boldman, and Arapaho Facilities that, at the time of the lodging of this Consent Decree, are subject to Subpart KKK shall be an “affected facility” under Subpart OOOO and subject to Subpart OOOO standards. Once Subpart OOOO applies to a Process Unit pursuant to this Consent Decree, then the requirements of Subpart KKK shall no longer apply prospectively to that unit.

c. By no later than 18 months after the Effective Date, all Process Units at the Siloam, Majorsville and Carthage Facilities that, at the time of the lodging of this Consent Decree, are subject to Subpart KKK shall be an “affected facility” under Subpart OOOO and subject to Subpart OOOO standards. Once Subpart OOOO applies to a Process Unit pursuant to this Consent Decree, then the requirements of Subpart KKK shall no longer apply prospectively to that unit.

d. By no later than two years after the Effective Date, all Process Units at the Javelina Facility that, at the time of the lodging of this Consent Decree, are subject to Subpart KKK shall be an “affected facility” under Subpart OOOO and subject to Subpart

OOOO standards. Once Subpart OOOO applies to a Process Unit pursuant to this Consent Decree, then the requirements of Subpart KKK shall no longer apply prospectively to that unit.

20. Connector Monitoring at Subpart KKK Process Units. This Paragraph applies to connectors in gas/vapor service and in light liquid service for all Covered Process Units located at the Cobb, Kenova, Siloam, Langley, Boldman, Arapaho, Majorsville, Javelina, and Carthage Facilities at the time of the lodging of this Consent Decree.

a. For All Facilities in Paragraph 20, Except for the Javelina, Siloam, Majorsville and Carthage Facilities: By no later than one year after the Effective Date, Defendants shall: (a) identify and include in facility LDAR program databases such connectors; and (b) conduct and complete initial monitoring of such connectors, subject to the provisions of 40 C.F.R. §§ 60.482-11a(d) and (e). Such monitoring required under this Paragraph shall be conducted in accordance with the provisions of 40 C.F.R. § 60.482-11a, and all leaks detected greater than or equal to 500 ppm shall be repaired in accordance with the requirements of 40 C.F.R. § 60.482-11a(d).

b. For Siloam, Majorsville and Carthage Facilities: By no later than 18 months after the Effective Date, Defendants shall: (a) identify, and include in facility LDAR program databases such connectors; and (b) conduct and complete initial monitoring of such connectors, subject to the provisions of 40 C.F.R. §§ 60.482-11a(d) and (e). Such monitoring required under this Paragraph shall be conducted in accordance with the provisions of 40 C.F.R. § 60.482-11a, and all leaks detected greater than or equal to 500 ppm shall be repaired in accordance with the requirements of 40 C.F.R. § 60.482-

11a(d).

c. For the Javelina Facility: By no later than two years after the Effective Date, Defendants shall: (a) identify, and include in facility LDAR program databases such connectors; and (b) conduct and complete initial monitoring of such connectors, subject to the provisions of 40 C.F.R. §§ 60.482-11a(d) and (e). Such monitoring required under this Paragraph shall be conducted in accordance with the provisions of 40 C.F.R. § 60.482-11a, and all leaks detected greater than or equal to 500 ppm shall be repaired in accordance with the requirements of 40 C.F.R. § 60.482-11a(d).

B. LDAR Program

21. Applicability.

a. The requirements of this LDAR Program shall apply to all Covered Equipment and all Covered Process Units at the Covered Facilities, except (1) the requirements under Paragraphs 23-47 shall not apply to Cobb, Kenova, Langley, Boldman, Carthage East, Arapaho, Buffalo Creek, and Hidalgo Facilities, and (2) the timing requirements for this LDAR Program at the Javelina, Siloam, Majorsville, and Carthage Facilities are set forth in Paragraphs 21.b. and 21.c below. The requirements of this LDAR Program are in addition to, and not in lieu of, the requirements of any other LDAR regulation that may be applicable to a piece of Covered Equipment. If there is a conflict between an LDAR regulation and this LDAR Program, Defendants shall follow the more stringent of the requirements.

b. For the Siloam, Majorsville, and Carthage Facilities: the requirements of this LDAR Program shall apply no later than 18 months after the Effective Date.

c. For the Javelina Facility: the requirement of this LDAR Program shall apply no later than two years after the Effective Date.

22. LDAR Document. By no later than 180 Days after the Effective Date, Defendants shall develop, for each Covered Facility, a facility-wide document that describes: (i) the LDAR program (e.g., applicability of regulations to process units and/or specific equipment; leak definitions; monitoring frequencies) that includes the flowchart set forth in Appendix C; (ii) a tracking program (e.g., Management of Change as provided in Paragraph 46) that ensures that new pieces of equipment added to the Covered Facility for any reason are integrated into the LDAR program and that pieces of equipment that are taken out of service are removed from the LDAR program; (iii) the roles and responsibilities of all employee and contractor personnel assigned to LDAR functions at the Facility; (iv) how the number of personnel dedicated to LDAR functions is sufficient to satisfy the requirements of the LDAR program; and (v) how the Covered Facility plans to implement this LDAR Program under this Consent Decree. Once developed, Defendants shall review the LDAR Document annually and update it by no later than March 31 of each year.

23. Monitoring Frequency. Beginning no later than 180 Days after the Effective Date, for all Covered Equipment, Defendants shall comply with the following periodic monitoring frequencies, unless: (i) more frequent monitoring is required by federal, state, or local laws or regulations; or (ii) the relevant Covered Process Unit has been permanently shut down:

- a. Valves – Quarterly
- b. Pumps – Monthly
- c. Connectors – Annually

Compliance with the monitoring frequencies in this Paragraph is not required when an applicable LDAR regulation excludes or exempts, fully or partially, monitoring at a periodic frequency (e.g., an exemption for equipment that is designated as unsafe-to-monitor or difficult-to-monitor or an exemption for pumps that have no externally actuated shaft), provided that Defendants satisfy all applicable conditions and requirements for the exclusion or exemption set forth in the regulation.

24. Method 21 Data Logging. Beginning no later than 180 Days after the Effective Date, for all Covered Equipment, Defendants shall comply with Method 21 in performing LDAR monitoring, using an instrument attached to a data logger (or an equivalent instrument) which directly records electronically the Screening Value detected at each piece of Covered Equipment, the date and time that each Screening Value is taken, and the identification numbers of the monitoring instrument and the technician. Defendants shall transfer this monitoring data to an electronic database on at least a weekly basis for recordkeeping purposes.

25. If, during monitoring in the field, a piece of Covered Equipment is discovered that is not listed in the data logger, Defendants are permitted to monitor the piece of Covered Equipment and record, by any means available, the Screening Value, the date and time of the Screening Value, and the identification numbers of the monitoring instrument and technician. In such an instance, the failure to initially record the information electronically, in the data logger, does not constitute a violation of this Paragraph's requirement to record the required information electronically, provided that Defendants thereafter promptly add the piece of Covered Equipment and the information regarding the monitoring event to the LDAR database.

26. Covered Facilities that are complying with the alternative work practice ("AWP")

as provided in 40 C.F.R. § 60.18(g) at the Date of Lodging may continue to comply with the AWP for purposes of complying with “LDAR Monitoring Frequency and Equipment” provisions of this Consent Decree.

27. Action Levels.

a. Beginning no later than 180 Days after the Effective Date of this Consent Decree and continuing until termination of this Consent Decree, for all leaks from Covered Equipment detected at or above the leak definitions listed in Table 1 for each of the specific Covered Types of Equipment, Defendants shall perform repairs in accordance with Paragraphs 28-33.

Table 1: Leak Definitions for Covered Types of Equipment

Covered Type of Equipment	Lower Leak Definition (ppm)
Valves	500
Connectors	500
Pumps	2,000

b. Pursuant to Paragraph 19 of this Consent Decree, valves in Covered Process Units subject to Subpart KKK as of the date of lodging of this Consent Decree shall be subject to the leak definition set forth under Subpart KKK until such time such Covered Process Units become subject to Subpart OOOO under Paragraph 19.

c. For purposes of these lower leak definitions, Defendants may elect to adjust or not to adjust the monitoring instrument readings for background pursuant to any provisions of applicable LDAR regulations that address background adjustment, provided

that Defendants comply with the requirements for doing so or not doing so.

d. Beginning no later than 180 Days after the Effective Date of this Consent Decree, for all Covered Equipment, and all valves and pumps in heavy liquid service, at any time, including outside of periodic monitoring, evidence of a potential leak is detected through audio, visual, or olfactory sensing, Defendants shall comply with all applicable regulations and, if repair is required, with Paragraphs 28-33.

28. Repairs. Except as provided in Subparagraph 38.d.i., by no later than five Days after detecting a leak, Defendants shall perform a first attempt at repair. By no later than 15 Days after detection, Defendants shall perform a final attempt at repair of the leaking piece of Covered Equipment or may place the piece of Covered Equipment on the DOR list provided that Defendants have complied with all applicable LDAR regulations and with the requirements of Paragraphs 29-33, 34 (valve replacement and improvement), and Paragraphs 44 and 45 (connector replacement).

29. Repair Verification Monitoring. Except as provided in Subparagraph 38.d.i., beginning no later than 180 Days after the Effective Date of this Consent Decree and continuing until termination of this Consent Decree, Defendants shall perform Repair Verification Monitoring.

30. Drill and Tap for Valves (other than Control Valves).

a. Except as provided in Subparagraph 30.b., for leaking valves (other than control valves), when other repair attempts have failed to reduce emissions below the applicable leak definition and Defendants are not able to remove the leaking valve from service, Defendants shall attempt at least one drill-and-tap repair (with a second injection

of an appropriate sealing material if the first injection is unsuccessful at repairing the leak) before placing the valve (other than provisionally, as set forth in Subparagraph 30.c.) on the DOR list.

b. Drill-and-tap is not required: (i) when Subparagraph 38.d.i. applies; or (ii) when there is a safety, major mechanical, major product quality, or environmental issue with repairing the valve using the drill-and-tap method, in which case, Defendants shall document the reason(s) why any drill-and-tap attempt was not performed prior to placing any valve on the DOR list.

c. If a drill-and-tap attempt can reasonably be completed within the 15-Day repair period, Defendants shall complete the drill-and-tap attempt in that time period. If a drill-and-tap attempt cannot reasonably occur within the 15-Day repair period (*e.g.*, if Defendants' drill-and-tap contractor is not local and must mobilize to the Covered Facility), Defendants provisionally may place the valve on the DOR list pending attempting the drill-and-tap repair as expeditiously as practical. Absent one of the exceptions found in Paragraph 30.b above or as otherwise agreed to in writing by the EPA, in consultation with the Applicable State Co-Plaintiff, in no event may Defendants take more than 30 Days from the initial monitoring to attempt a drill-and-tap repair. If upon Repair Verification Monitoring, drill-and-tap is deemed successful by reference to a Screening Value of less than 500 ppm, the valve shall be removed from the provisional DOR list and considered repaired.

31. Except as provided in Subparagraph 38.d.i., for each leak, Defendants shall record the following information: the date of all repair attempts; the repair methods used during each

repair attempt; the date, time and Screening Values for all re-monitoring events; and, if applicable, documentation of compliance with Paragraphs 30 and 33 for Covered Equipment placed on the DOR list.

32. Nothing in Paragraphs 28-31 is intended to prevent Defendants from taking a leaking piece of Covered Equipment out of service; provided, however, that prior to placing the leaking piece of Covered Equipment back in service, Defendants must repair the leak or must comply with the requirements of Paragraph 33 to place the piece of Covered Equipment on the DOR list.

33. Delay of Repair. Beginning no later than the Effective Date of this Consent Decree for the requirements in Subparagraphs 33.b and c.i., and beginning no later than 180 after the Effective Date of this Consent Decree for the other requirements set forth below in this Paragraph, for all Covered Equipment placed on the DOR list, Defendants shall:

- a. Require sign-off from the relevant process unit supervisor or person of similar authority that the piece of Covered Equipment is technically infeasible to repair; without a process unit shutdown;
- b. Undertake periodic monitoring of the Covered Equipment placed on the DOR list at the frequency specified in Paragraph 23 required for other pieces of Covered Equipment of that type in the process unit; and
- c. (i) Repair the piece of Covered Equipment within the time frame required by the applicable LDAR regulation; or (ii) if applicable under Paragraphs 34-45, replace, repack, or improve the piece of Covered Equipment by the timeframes set forth in Paragraphs 34-45.

Valve Replacement and Improvement Program

34. Valve Replacement and Improvement Program. Commencing no later than 180 Days after the Effective Date for Covered Process Units subject to Subpart OOOO as of the Date of Lodging of this Consent Decree, and commencing no later than 365 Days after the Effective Date of this Consent Decree for Covered Process Units subject to Subpart KKK as of the Date of Lodging of this Consent Decree, and continuing until termination of this Consent Decree, Defendants shall implement the program set forth in Paragraphs 34-43 to improve the emissions performance of the valves that are Covered Equipment in each Covered Process Unit. All references to “valves” in Paragraphs 34-43 exclude pressure relief valves.

35. List of all Existing Valves in the Covered Process Units. In the first compliance status report required under Paragraph 58, Defendants shall include a list of the tag numbers of all valves subject to this LDAR Program, broken down by Covered Process Unit, that are in existence as of the Effective Date. The valves on this list shall be the “Existing Valves” for purposes of Paragraphs 36-38.

36. Proactive Initial Valve Tightening Work Practices Relating to each New Valve that Is Installed and each Existing Valve that Is Repacked. Defendants shall undertake the work practices specified in this Paragraph with respect to each new valve that is subject to LDAR that is installed (whether the new valve replaces an Existing Valve or is newly added to a Covered Process Unit) and each Existing Valve that is repacked. Upon installation (or re-installation in the case of repacking), Defendants shall tighten the valve’s packing gland nuts or their equivalent (e.g., pushers) to: (i) the manufacturer’s recommended gland nut or packing torque; or (ii) any appropriate tightness that will minimize the potential for fugitive emission leaks of any

magnitude. This practice shall be implemented prior to the valve's exposure (or re-exposure, in the case of repacking) to process fluids.

37. Installing New Valves. Except as provided in Subparagraphs 37.a., b., c., or Paragraph 40, Defendants shall ensure that each new valve (other than a valve that serves as the closure device on an open-ended line) that it installs in each Covered Process Unit, and that, when installed, will be regulated under applicable LDAR regulations, either is a Low-E Valve or is fitted with Low-E Packing. This requirement applies to entirely new valves that are added to a Covered Process Unit and to Existing Valves that are replaced for any reason in a Covered Process Unit.

a. Paragraph 37 shall not apply in emergencies or exigent circumstances requiring immediate installation or replacement of a valve where a Low-E Valve or Low-E Packing is not available on a timely basis. Any such instance shall be reported in the next LDAR Program compliance status report.

b. Paragraph 37 shall not apply to valves that are installed temporarily for a short-term purpose and then removed (*e.g.*, valves connecting a portion of the Covered Process Unit to a testing device).

38. Replacing or Repacking Existing Valves with Low-E Valves or Low-E Packing.

a. Existing Valves Required to Be Replaced or Repacked. Except as provided in Paragraph 40, for each Existing Valve that has a Screening Value at or above 500 ppm twice in any 4-year period, Defendants shall either replace or repack the Existing Valve with a Low-E Valve or with Low-E Packing.

b. Timing: If Replacing or Repacking Does Not Require a Process Unit Shutdown. If replacing or repacking does not require a process unit shutdown, Defendants shall replace or repack the Existing Valve by no later than 30 Days after the monitoring event that triggers the replacing or repacking requirement, unless Defendants comply with the following:

- i. Prior to the 30 Day deadline, Defendants must take actions necessary to obtain the required valve or valve packing, including all necessary associated materials, as expeditiously as practical, and retain documentation of the actions taken and the date of each such action;
- ii. If, despite Defendants' efforts to comply with Subparagraph 38.b.i., the required valve or valve packing, including all necessary associated materials, is not available in time to complete the installation within 30 Days, Defendants must take all reasonable actions to minimize emissions from the valve pending completion of the required replacing or repacking.

Examples include:

- (a) Repair;
- (b) More frequent monitoring, with additional repairs as needed; or
- (c) Where practical, interim replacing or repacking of a valve with a valve that is not a Low-E Valve or with packing that

is not Low-E Packing; and

- iii. Defendants must promptly perform the required replacing or repacking after Defendants' receipt of the valve or valve packing, including all necessary associated materials.

c. Timing: If Replacing or Repacking Requires a Maintenance Unit

Shutdown. If replacing or repacking requires a Maintenance Unit Shutdown, Defendants shall replace or repack the Existing Valve during the first Maintenance Shutdown that follows the monitoring event that triggers the requirement to replace or repack the valve, unless Defendants document that insufficient time existed between the monitoring event and the Maintenance Shutdown to enable Defendants to purchase and install the required valve or valve packing technology. In that case, Defendants shall undertake the replacing or repacking at the next Maintenance Shutdown that occurs after Defendants' receipt of the valve or valve packing, including all necessary associated materials.

d. Actions Required Pending Replacing or Repacking Pursuant to

Subparagraphs 38.a.-38.c.

i. Actions Required Pursuant to Paragraphs 28-33:

Defendants shall not be required to comply with Paragraphs 28-33, *e.g.*, drill and tap, pending replacing or repacking pursuant to Subparagraphs 38.a.-38.c. if Defendants complete the replacing or repacking by the date that is no later than 30 Days after detecting the leak. If Defendants do not complete the replacing or repacking within 30 Days, or if at the time of the leak detection Defendants

reasonably can anticipate that they might not be able to complete the replacing or repacking within 30 Days, Defendants shall comply with all applicable requirements of Paragraphs 28-33.

ii. Actions Required Pursuant to Applicable Regulations.

For each Existing Valve that has a Screening Value at or above 500 ppm, Defendants shall comply with all applicable regulatory requirements, including repair and “delay of repair,” pending replacing or repacking pursuant to Subparagraphs 38.a-38.c.

39. Provisions Related to Low-E Valves and Low-E Packing.

a. Low-E Status Not Affected by Subsequent Leaks. If, during monitoring or after installation, a Low-E Valve or a valve using Low-E Packing has a Screening Value at or above 500 ppm, the leak is not a violation of this Consent Decree, does not invalidate the “Low-E” status or use of that type of valve or packing technology, and does not require replacing other, non-leaking valves or packing technology of the same type.

b. Repairing Low-E Valves. If, during monitoring after installation, a Low-E Valve or a valve using Low-E Packing has a Screening Value at or above 500 ppm, Paragraphs 28-33 shall apply.

40. Commercial Unavailability of a Low-E Valve or Low-E Packing. Defendants shall not be required to utilize a Low-E Valve or Low-E Packing to replace or repack a valve if a Low-E Valve or Low-E Packing is commercially unavailable. The factors relevant to the question of commercial unavailability and the procedures that Defendants must follow to assert

that a Low-E Valve or Low-E Packing is commercially unavailable are set forth in Appendix A.

41. Records of Low-E Valves and Low-E Packing. Prior to installing any Low-E Valves or Low-E Packing, or if not possible before installation, then as soon as possible after installation, Defendants shall secure from each manufacturer documentation that demonstrates that the proposed valve or packing technology meets the definition of “Low-E Valve” and/or “Low-E Packing.” Defendants shall make the documentation available upon request by EPA or the Applicable State Co-Plaintiff.

42. Nothing in Paragraphs 37-40 requires Defendants to utilize any valve or valve packing technology that is not appropriate for its intended use in a Covered Process Unit.

43. In each Compliance Status Report due under Paragraph 58 of this Decree, Defendants shall include a separate section in the Report that: (i) describes the actions it took to comply with Paragraphs 34-432 (Valve Replacement and Improvement Program), including identifying each piece of equipment that triggered a requirement under Paragraphs 34-42, the Screening Value for that piece of equipment, the type of action taken (i.e., replacement, repacking, or improvement, and the date when the action was taken); (ii) identifies any required actions that were not taken and explains why; and (iii) identifies the schedule for any known future replacements, repackings, improvements, or eliminations.

44. Connector Replacement and Improvement Descriptions.

a. For purposes of Paragraph 45, for each of the following types of existing connectors (i.e., a connector in use at a Covered Process Unit on the Date of Lodging), the following type of replacement or improvement shall apply:

<u>Connector Type</u>	<u>Replacement or Improvement Description</u>
Flanged	Replacement or improvement of the gasket
Threaded	Replacement of the connector with a like-kind connector or other
Compression	Replacement of the connector with a like-kind connector or other
CamLock	Replacement or improvement of the gasket or replacement or improvement of the CamLock
Quick Connect	Replacement or improvement of the gasket, if applicable, or replacement of the connector (with either a like-kind connector or other), if there is no gasket
Any type	Elimination (<i>e.g.</i> , through welding, pipe, etc.)

For purposes of this Paragraph, “gasket” means a sealing element that includes, but is not limited to, an O-ring, gasket, or D-ring.

b. In cases where a like-kind replacement is utilized as the method for replacing or improving an existing connector (*e.g.*, a Quick Connect replaces another Quick Connect), the provisions of Subparagraphs 44.b.i. and ii. shall apply.

i. If there are types, models or styles of a like-kind connector that are less likely to leak than the existing connector, and one or more of those types, models or styles are technically feasible to use (considering the service, operating conditions, and type of piping or tubing that the connector is in), and would not create a safety, major mechanical, major product quality, regulatory or other issue, Defendants shall select a like-kind connector from among such types, models or styles.

- ii. If Subparagraph 44.b.i. does not apply, Defendants may install a like-kind connector that is the same type, model or style as the existing connector.

45. Replacing or Improving Connectors.

a. Trigger for Replacement or Improvement Requirements. For each connector that, in any two of three consecutive monitoring periods, has a Screening Value at or above 500 ppm, Defendants shall replace or improve the connector in accordance with the applicable replacement or improvement described in Paragraph 44. Defendants shall use best efforts to install a replacement or improvement that will be the least likely to leak, using good engineering judgment, for the service, operating conditions, and type of piping or tubing to which the connector is connected.

b. Timing. If the replacement or improvement does not require a process unit shutdown, Defendants shall undertake the replacement or improvement within 30 Days after the monitoring event that triggers the replacement or improvement requirement. If the replacement or improvement requires a process unit shutdown, Defendants shall undertake the replacement or improvement during the first Maintenance Shutdown that follows the monitoring event that triggers the requirement to replace or improve the connector, unless Defendants document that insufficient time existed between the monitoring event and the Maintenance Shutdown to enable Defendants to secure and install the replacement or improvement. In that case, Defendants shall undertake the replacement or improvement at the next Maintenance Shutdown that follows thereafter.

c. Repair Requirements Pending Replacements or Improvements Pursuant to Subparagraph 45.a. and b. For each connector that has a Screening Value at or above 500 ppm, Defendants shall not be required to comply with Subparagraphs 45.a. and b. pending replacement or improvement pursuant to Subparagraph 45.a. if Defendants complete the replacement or improvement within 30 Days of detecting the leak.

d. Nothing in Paragraphs 44-45 requires Defendants to utilize any connector that is not appropriate for its intended use in a Covered Process Unit.

e. In each Compliance Status Report due under Paragraph 58 of this Decree, Defendants shall include a separate section in the Report that: (i) describes the actions it took to comply with Paragraph 44-45 (Connector Replacement and Improvement Program), including identifying each piece of equipment that triggered a requirement under Paragraph 45, the Screening Value for that piece of equipment, the type of action taken); (ii) identifies any required actions that were not taken and explains why; and (iii) identifies the schedule for any planned future action to comply with Paragraph 45.

46. Management of Change. To the extent not already done, beginning no later than 180 Days after the Effective Date of this Consent Decree, Defendants shall, for each Covered Facility, implement a “Management of Change Protocol” that shall ensure that each valve, pump, and connector added to the Covered Process Units at the Covered Facility for any reason is evaluated to determine if it is subject to LDAR regulations. Defendants also shall ensure that each valve, pump, and connector that was subject to the LDAR Program is eliminated from the LDAR Program if it is physically removed from a Covered Process Unit. This evaluation shall be a part of Defendants’ facility-wide Management of Change Protocol.

47. Training. By no later than 270 Days after the Effective Date, Defendants shall develop, for each Covered Facility, a training protocol (or, as applicable, require its contractor(s) to develop a training protocol for the contractor's employees) and shall ensure that all LDAR Personnel have completed training on all aspects of LDAR, including this LDAR Program, that are relevant to the person's duties. Once per calendar year starting in the calendar year after completion of initial training, Defendants shall ensure that refresher training is performed with respect to each employee and contractor; provided, however, that refresher training is not required if an individual's employment at the Covered Facility ceases prior to the end of the calendar year or no longer involves duties relevant to LDAR. Beginning no later than the Effective Date and continuing until termination of this Consent Decree, Defendants shall ensure (or as applicable, require its contractor to ensure for the contractor's employees) that new LDAR Personnel are sufficiently trained no more than 90 Days prior to any field involvement (other than supervised involvement for purposes of training) with LDAR and/or the LDAR Program.

48. Daily Certification by Monitoring Technicians. Commencing by no later than 30 Days after the Effective Date, on each Day that monitoring occurs, at the end of such monitoring, Defendants shall ensure that each monitoring technician certifies that the data collected accurately represents the monitoring performed for that Day by requiring the monitoring technician to sign a form that includes the following certification:

On [insert date], I reviewed the monitoring data that I collected today and to the best of my knowledge and belief, the data accurately represents the monitoring that I performed today.

49. QA/QC. Commencing by no later than the first full calendar Quarter after the Effective Date, at times that are not announced to the LDAR monitoring technicians, an LDAR-

trained employee or contractor of Defendants, who does not serve on a routine basis as an LDAR monitoring technician at the Covered Facility, shall undertake the following no less than once per calendar Quarter at such Covered Facility:

- a. Verify that equipment was monitored at the appropriate frequency;
- b. Verify that proper documentation and sign-offs have been recorded for all equipment placed on the DOR list;
- c. Ensure that repairs have been performed in the required periods;
- d. Review monitoring data and equipment counts (*e.g.*, number of pieces of equipment monitored per Day) for feasibility and unusual trends;
- e. Verify that proper calibration records and monitoring instrument maintenance information are maintained;
- f. Spot check that LDAR records are maintained as required; and
- g. Observe in the field each LDAR monitoring technician who is conducting leak detection monitoring to ensure that monitoring during the quarterly QA/QC is being conducted as required.

Defendants shall promptly correct any deficiencies detected or observed. Defendants shall maintain a log that: (i) records the date and time that the reviews, verifications, and observations required by this Paragraph are undertaken; and (ii) describes the nature and timing of any corrective actions taken.

50. LDAR Audit Schedule.

- a. Defendants shall ensure that three LDAR Audits of all Covered Process Units at the Covered Facilities Houston, Bluestone, Mobley, Sherwood, Hopedale, Cadiz,

Seneca, and Utica Condensate are conducted within 5 years after the Effective Date of the Consent Decree in accordance with the following schedule: for the first LDAR Audit, the LDAR Audit Commencement Date shall be no later than 365 Days after the Effective Date of this Consent Decree; for each subsequent LDAR Audit, the LDAR Audit Completion Date shall occur within the same calendar Quarter that the first LDAR Audit Completion Date occurred and shall be no sooner than 2 years from the Completion Date of the prior LDAR Audit.

b. Defendants shall ensure that three LDAR Audits of all Covered Process Units at the Javelina Facility are conducted within 7 years after the Effective Date of the Consent Decree in accordance with the following schedule: for the first LDAR Audit, the LDAR Audit Commencement Date shall be no later than 3 years after the Effective Date of this Consent Decree; for each subsequent LDAR Audit, the LDAR Audit Completion Date shall occur within the same calendar Quarter that the first LDAR Audit Completion Date occurred and shall be no sooner than 2 years from the Completion Date of the prior LDAR Audit.

c. Defendants shall ensure that three LDAR Audits of all Covered Process Units at the Siloam, Majorsville, and Carthage Facilities are conducted within 6 years after the Effective Date of the Consent Decree in accordance with the following schedule: for the first LDAR Audit, the LDAR Audit Commencement Date shall be no later than 2 years after the Effective Date of this Consent Decree; for each subsequent LDAR Audit, the LDAR Audit Completion Date shall occur within the same calendar Quarter that the first LDAR Audit Completion Date occurred and shall be no sooner than 2 years from the

Completion Date of the prior LDAR Audit.

d. Defendants shall ensure that two LDAR Audits of all Covered Process Units at the Covered Facilities Cobb, Kenova, Arapaho, Boldman, Buffalo Creek, Carthage East, Langley, and Hidalgo are conducted within 5 years after the Effective Date of the Consent Decree in accordance with the following schedule: for the first LDAR Audit, the LDAR Audit Commencement Date shall be no later than 730 Days after the Effective Date of this Consent Decree; for the subsequent LDAR Audit, the LDAR Audit Completion Date shall occur in the fifth calendar year of the Consent Decree.

51. Requirements related to persons conducting LDAR Audits. For the LDAR Audits to be conducted under this Consent Decree, Defendants shall retain a third-party with experience in conducting LDAR Audits, except that, at their discretion, Defendants may conduct the second LDAR Audit at Covered Facilities subject to Paragraph 50.a., b. and c. internally with their own personnel, provided that: the personnel Defendants use are not employed at the Covered Facility being audited but rather are employed centrally at one or more other facilities owned or operated by Defendants; and the personnel are experienced in conducting LDAR Audits at such other facilities that have previously implemented or are currently implementing an LDAR Program. For each third-party LDAR Audit, Defendants shall select a different company than the Facility's regular LDAR contractor to perform the third-party LDAR Audit and Defendants may not hire that company as the Covered Facility's regular LDAR contractor during the life of this Consent Decree.

52. For each Covered Process Unit, each LDAR Audit shall include: (i) reviewing

compliance with all applicable LDAR regulations, including LDAR requirements related to valves and pumps in heavy liquid service; (ii) reviewing and/or verifying the same items that are required to be reviewed and/or verified in Paragraph 49; (iii) reviewing whether any pieces of equipment that are required to be in the LDAR program are not included; and (iv) “comparative monitoring” as described in Paragraph 53. LDAR Audits after the first audit at each Covered Facility shall also include reviewing the Covered Facility’s compliance with this LDAR Program.

53. Comparative Monitoring. Comparative monitoring during LDAR Audits shall be undertaken as follows:

a. Calculating a Comparative Monitoring Audit Leak Percentage. Covered Types of Equipment shall be monitored in order to calculate a leak percentage for the Covered Process Units. For descriptive purposes under this Paragraph, the monitoring that takes place during an LDAR Audit shall be called “comparative monitoring” and the leak percentages derived from the comparative monitoring shall be called the “Comparative Monitoring Audit Leak Percentages.” Defendants shall undertake comparative monitoring of the Covered Types of Equipment in the Covered Process Units during each LDAR Audit. In undertaking Comparative Monitoring, Defendants shall not be required to monitor every component in each Covered Process Unit.

b. Calculating the Historic, Average Leak Percentage from Prior Periodic Monitoring Events. The Historic, Average Leak percentage from prior periodic monitoring events, broken down by Covered Type of Equipment, shall be calculated. Four complete monitoring periods immediately preceding the comparative monitoring

shall be used for this purpose. The preceding monitoring periods may comprise a mix of the monitoring periods and frequencies specified in Paragraph 23.

c. Calculating the Comparative Monitoring Leak Ratio. For the Covered Process Units, the ratio of the Comparative Monitoring Audit Leak Percentage from Subparagraph 53.a. to the Historic, Average Leak percentage from Subparagraph 53.b. shall be calculated. This ratio shall be called the “Comparative Monitoring Leak Ratio.” If the denominator in this calculation is “zero,” it shall be assumed (for purposes of this calculation but not for any other purpose under this Consent Decree or under any applicable laws and regulations) that one leaking piece of Covered Equipment was found in the Process Unit through routine monitoring during the 365-Day period before the comparative monitoring.

54. When More Frequent Periodic Monitoring is Required. If a Comparative Monitoring Audit Leak Percentage calculated pursuant to Subparagraph 53.a. triggers a more frequent monitoring schedule under any applicable federal, state, or local law or regulation than the frequencies listed in Paragraph 23 as applicable for the Covered Type of Equipment in that Covered Process Unit, Defendants shall monitor the Covered Type of Equipment at the greater frequency unless and until less frequent monitoring is again allowed under the specific federal, state, or local law or regulation. At no time may Defendants monitor at intervals less frequently than those listed in Paragraph 23.

55. Corrective Action Plan (“CAP”).

a. Requirements of a CAP. By no later than the date that is 60 Days after each LDAR Audit Completion Date, Defendants shall develop a preliminary Corrective

Action Plan for a Covered Facility if: (i) the results of an LDAR Audit identify any deficiencies for that Covered Facility; or (ii) a Comparative Monitoring Leak Ratio calculated pursuant to Subparagraph 53.c. is 3.0 or higher *and* the Comparative Monitoring Audit Leak Percentage calculated pursuant to Subparagraph 53.a. is greater than or equal to 0.5 percent for such Covered Facility. The preliminary CAP shall describe the actions that Defendants have taken or shall take to address: (i) the deficiencies and/or (ii) the causes of a Comparative Monitoring Leak Ratio that is 3.0 or higher (but only if the Comparative Monitoring Audit Leak Percentage is at or above 0.5 percent). Defendants shall include a schedule by which actions that have not yet been completed shall be completed. Defendants promptly shall complete each corrective action item with the goal of completing each action within 90 Days after the LDAR Audit Completion Date. If any action is not completed or not expected to be completed within 90 Days after the LDAR Audit Completion Date, Defendants shall explain the reasons and propose a schedule for prompt completion in the final CAP to be submitted under Subparagraph 55.b.

b. Submission of the Final CAP to EPA. By no later than 120 Days after the LDAR Audit Completion Date, Defendants shall submit the final CAP to EPA and the Applicable State Co-Plaintiff, together with a certification of the completion of each item of corrective action completed during the period. If any action is not completed within 90 Days after the LDAR Audit Completion Date, Defendants shall explain the reasons, together with a proposed schedule for prompt completion. Defendants shall submit a supplemental certification of completion by no later than 30 Days after completing all

actions.

c. EPA Comment on CAP. EPA may submit comments on the CAP, in consultation with the Applicable State Co-Plaintiff. Within that date that is 30 Days after receipt of any comments from EPA, Defendants shall submit a reply. Disputes arising with respect to any aspect of a CAP shall be resolved in accordance with the dispute resolution provisions of this Decree.

56. Certification of Compliance. Within 180 Days after the initial LDAR Audit Completion Date, Defendants shall certify to EPA and the Applicable State Co-Plaintiff that, to the signer's best knowledge and belief formed after reasonable inquiry: (i) except as otherwise identified, the Covered Facility is in compliance with all applicable LDAR regulations and this LDAR Program; (ii) Defendant has completed all corrective actions, if applicable, or is in the process of completing all corrective actions pursuant to a CAP; and (iii) all equipment at the Facility that is regulated under LDAR has been identified and included in the LDAR program. To the extent that Defendants cannot make the certification in all respects, it shall specifically identify any deviations from Items (i)–(iii) in this Paragraph.

57. Recordkeeping. Defendants shall keep all records required by this LDAR Program, including each LDAR Audit report, to document compliance with the requirements of this LDAR Program as provided in Paragraph 160. Upon request by EPA, Defendants shall make all such documents available to EPA and the State Co-Plaintiffs, and shall provide, in electronic format if so requested, all LDAR monitoring data generated during the life of this Consent Decree.

58. LDAR Program Compliance Status Reports. On the dates and for the time

periods set forth in Section VIII (Reporting Requirements) Defendant shall submit to EPA and the Applicable State Co-Plaintiff, in the manner set forth in Section IX (Notices), a report containing the following information for each Covered Facility:

- a. The number of LDAR Personnel at the Covered Facility (excluding Personnel whose functions involve the non-monitoring aspects of repairing leaks) and the approximate percentage of time each such person dedicated to performing his/her LDAR functions;
- b. An identification and description of any non-compliance with the requirements of Section V.A. or B. of this Consent Decree;
- c. An identification of any problems encountered in complying with the requirements of Section V.A or V.B of this Consent Decree;
- d. The list of Existing Valves as required by Paragraph 35;
- e. The information required by Paragraph 43;
- f. The information required by Paragraph 45;
- g. A copy of the Management of Change Protocol required under Paragraph 46;
- h. A description of the trainings done in accordance with this Consent Decree;
- i. Any deviations identified in the QA/QC performed under Paragraph 49, as well as any corrective actions taken under that Paragraph;
- j. A summary of LDAR Audit results including specifically identifying all alleged deficiencies;

k. The status of all actions under any CAP that was submitted during the reporting period, unless the CAP was submitted less than 30 Days before the compliance status report; and

l. Claims of commercial unavailability in accordance with Paragraph 40 and Appendix A.

C. Pilot-Operated Modulating Pressure Relief Valves (“PORVs”)

59. As of the Effective Date of this Consent Decree, Defendants shall install and operate Bottom Dome Vent Piping on any new PORV that is or will be subject to the requirements of Subparts KKK or OOOO, with the exception of the PORV categories identified in Subparagraph 59.a or b:

a. Atmospheric PORVs that are not otherwise required to be routed through a closed-vent system; or

b. Snap-action PORVs.

60. Beginning with the first full calendar Quarter after the Effective Date of the Consent Decree, or the alternative work practice in accordance with 40 C.F.R. § 60.18(g)-(i), Defendants shall conduct Method 21 monitoring on PORVs subject to Subparts KKK or Subpart OOOO on a quarterly frequency, unless: (i) more frequent monitoring is required by federal, state, or local laws or regulations; or (ii) the relevant Covered Process Unit has been permanently shut down.

61. Defendants shall repair all leaks of PORVs detected at or above 500 ppm in accordance with this Paragraph:

a. By no later than five Days after detecting a leak, Defendants shall perform

a first attempt at repair of the PORV. By no later than 15 Days after detection, Defendants shall perform a final attempt at repair of the PORV or place it on the DOR list provided that Defendants have complied with all applicable regulations.

b. Defendants shall conduct Repair Verification Monitoring after repair of any leaks.

c. For all PORVs placed on the DOR list, Defendants shall:

- i. Require sign-off from the relevant process unit supervisor or person of similar authority that the PORV is technically infeasible to repair without a process unit shutdown;
- ii. Undertake monthly Method 21 monitoring of PORVs placed on the DOR list; and
- iii. Repair the PORV within the time frame required by the applicable LDAR regulation.

62. By no later than 180 Days after the Effective Date, Defendants shall install Bottom Dome Vapor Recovery Piping on any existing PORV, that is subject to either Subpart KKK or OOOO, and that has a Pre-existing Tap and Isolation Valve, with the exception of the PORV categories identified in Subparagraph 59.a or b.

63. For the purposes of this Consent Decree, the following PORVs with pressure safety valve (PSV) identification numbers located at the Bluestone Facility are not covered by this Consent Decree: PSV-1003A, PSV-1003B, PSV-V103, and 0-PSV-1001.

64. For the purposes of this Consent Decree, the following PORVs with PSV identification numbers located at the Majorsville Facility are not covered by this Consent

Decree: PSV-361, PSV-462, PSV-463, PSV-2462, PSV-2463, PSV-2110, and PSV-2210.

65. For each leak identified under Paragraph 61 above, Defendants shall record the following information: the date the leak was identified and the Screening Value; the date of all repair attempts; the repair methods used during each repair attempt; the date, time, and Screening Values for all re-monitoring events; and, if applicable, documentation of compliance with Subparagraph c. for PORVs placed on the DOR list.

66. Reporting. On the dates and for the time periods set forth in Section VIII (Reporting), Defendants shall submit to EPA Headquarters, the EPA Regional Office(s), and Applicable State-Co-Plaintiffs, for each Covered Facility subject to Paragraphs 59-65 above, the following information for each Covered Facility:

a. The number of PORVs subject to Subparts KKK or OOOO that have Bottom Dome Vapor Recovery Piping.

b. The date of installation for the Bottom Dome Vapor Recovery Piping for the PORVs listed in Subparagraph a.

c. The number of PORVs subject to Subparts KKK or OOOO that do not have Bottom Dome Vapor Recovery Piping.

d. The number of PORVs subject to Subparts KKK or OOOO that do not have Bottom Dome Vapor Recovery Piping but have Pre-existing Taps and Isolation Valves.

e. The information required to be recorded under Paragraph 61, above.

f. The number of PORVs subject to Subparts KKK or OOOO that do not have Bottom Dome Vapor Recovery Piping that have triggered the requirement for

installation of Bottom Dome Vapor Recovery Piping.

g. The number of PORVs subject to Subparts KKK or OOOO that have been equipped with Bottom Dome Vapor Recovery Piping in compliance with Paragraph 62 of this Consent Decree and the installation dates.

h. For any PORV subject to Subparts KKK or OOOO that have triggered the requirement for installation of Bottom Dome Vapor Recovery Piping under Paragraph 62 but have not had such piping installed, the estimated date when such piping will be installed and operating.

i. The number of any new PORV installed that is not a replacement for an existing PORV, and whether the new PORV is subject to Subparts KKK or OOOO and whether the PORV has Bottom Dome Vapor Recovery Piping.

D. Subpart NNN

67. Beginning no later than 90 Days after the Effective Date, the following Covered Facilities shall comply with Subpart NNN as specified in Paragraph 68 at Distillation Units that are “affected facilities” as defined under 40 C.F.R. § 60.660: Houston, Bluestone, Siloam, Hopedale, Javelina, and Utica Condensate.

68. By no later than 180 Days after the Effective Date, Defendants shall comply with 40 C.F.R. § 60.660(d) by complying with the provisions in 40 C.F.R. Part 65, Subpart D, to satisfy the requirements of 40 C.F.R. §§ 60.662 through 60.665 and 60.668.

E. Fin Fan Units

69. By no later than 180 Days after the Effective Date, Defendants shall identify all Fin Fan Units at each Covered Facility that are in light liquid and/or gas/vapor service, as

defined in 40 C.F.R. § 60.481a.

70. By no later than 180 Days after the Effective Date, Defendants shall comply, with respect to Covered Facilities that operate Fin Fan Units that are in light liquid and/or gas/vapor service, with Paragraphs 71-73 below.

71. Defendants shall monitor Fin Fan Units as follows:

a. Defendants shall, on a quarterly frequency, monitor, while the Fin Fan Unit is operating, all plugs on the Fin Fan Unit plugs with an Optical Gas Imaging Instrument (“OGI”). Defendants shall comply with 40 C.F.R. § 60.18(h)(7)(i)(1)-(4) for each OGI used and employ a technician appropriately trained to detect VOC leaks using OGI.

b. No sooner than two years after Effective Date, Defendants may elect to monitor all plugs on the Fin Fan Unit in accordance with Paragraph 71.a. semi-annually if the leak rate is determined to be below 0.5%.

72. Defendants shall repair all leaks of Fin Fan Unit plugs in accordance with the following requirements:

a. By no later than five Days after detecting a leak, Defendants shall perform a first attempt at repair;

b. By no later than 15 Days after detection, Defendants shall perform a final attempt at repair, unless such repair requires a process unit shutdown; and

c. By no later than the end of the next Maintenance Shutdown.

73. Recordkeeping. Defendants subject to Paragraphs 69-72 above shall maintain the following records:

a. Identification of any Fin Fan Units in light liquid and/or gas/vapor service at the Covered Facility.

b. For each Fin Fan Unit, dates of OGI leak inspection, and for each such inspection, identification and number of plugs on each Fin Fan Unit subject to the leak repair requirement of Paragraph 72.

c. Dates of first attempt and final attempts at repair.

F. Railyard or any Other Enclosed Combustion Devices (including Portable)

74. By no later than 180 Days after the Effective Date, the following Covered Facilities shall comply with Subpart OOOO with the requirements of 40 C.F.R. § 60.482-10a(c) for each Enclosed Combustion Device: Siloam, Hopedale, and Houston.

75. Beginning no later than 270 Days after the Effective Date, at all times a Covered Facility is operating such that VOC could be sent to an Enclosed Combustion Device subject to Paragraph 74 above, Defendants shall maintain, for each Enclosed Combustion Device, the minimum operating temperature per the table below, to demonstrate continuous compliance with 40 C.F.R. § 60.482-10a(c):

Covered Facility	Minimum Temperature Limit (°F)	Rolling Averaging Period (hours)
Siloam	600	2
Hopedale	327	1
Houston	327	1

76. Beginning no later than 365 Days after the Effective Date of this Consent Decree, Defendants shall measure and record 15-minute average combustion operating temperature of each Enclosed Combustion Device subject to Paragraph 74 above. These 15-minute averages shall then be used to calculate and record the rolling average period per the table in Paragraph

75. This requirement shall apply at all times during operation of the Enclosed Combustion Devices except during device breakdowns, repairs, periodic accuracy evaluations, calibration checks, and zero span adjustments.

77. Recordkeeping. Defendants must maintain records of the average firebox temperature of each Enclosed Combustion Device subject to Paragraph 74 above, measured at least every 15 minutes, and averaged over the same period used to comply with Paragraph 75 and demonstrating compliance with Paragraph 76.

G. Hose Connections to Railcar/Truck Loading Operations

78. By no later than 180 Days after the Effective Date, Defendants shall identify each railcar loading bay and truck loading bay at each Covered Facility with a unique identifier.

79. By no later than 180 Days after the Effective Date, Defendants shall use either of the following options to monitor for leaks at any hose connections in VOC service during railcar or truck loading operations, or representative of loading conditions, at each railcar or truck loading bay at any Covered Facility:

a. Defendants shall conduct OGI monitoring in accordance with 40 C.F.R. § 60.18(g)-(i) of such hose connections during railcar or truck loading operations, or representative of loading conditions, at least once within each 60-Day period after 180 Days after the Effective Date at any railcar or truck loading bay that operates at least once during such 60-Day period, and by no later than 365 Days after the Effective Date, and annually thereafter, shall conduct Method 21 monitoring of such hose connections for any leaks above 500 ppm.

b. Defendants shall conduct Method 21 monitoring for any leaks above 500

ppm quarterly to identify leaks at any hose connections during railcar or truck loading operations, or representative of loading conditions, at each railcar or truck loading bay at any Covered Facility.

80. Defendants shall repair all leaks of hose connections identified under Paragraph 79, above, in accordance with the following requirements:

- a. By no later than five Days after detecting a leak, Defendants shall perform a first attempt at repair;
- b. By no later than 15 Days after detection, Defendants shall perform a final attempt at repair; and,
- c. By no later than the end of the next Maintenance Shutdown.

81. Defendants subject to Paragraph 78 above shall maintain the following records:

- a. Identification of each railcar loading and truck loading bay at each Covered Facility;
- b. For each bay, dates of the OGI and Method 21 monitoring event, and for each monitoring event, identification and number of connections that triggered leak repair requirements; and
- c. Dates of first attempt and final attempts at repair.

H. Natural Gasoline Storage Vessels

82. By no later than 180 Days after the Effective Date, Defendants shall install Isolation Valves upstream of all pressure relief devices operating on Natural Gasoline Storage Vessels at the Hopedale Facility, the Houston Facility, and the Siloam Facility.

83. Beginning with the first full calendar Quarter that begins after the Effective Date

of the Consent Decree, for Natural Gasoline Storage Vessels operating at Covered Facilities, Defendants shall conduct Method 21 monitoring for any leaks above 500 ppm from pressure relief devices operating on such Natural Gasoline Storage Vessels on a quarterly basis.

84. Except as provided in Paragraph 85 below, Defendants shall repair all leaks of pressure relief devices identified under Paragraph 83 above, in accordance with the following requirements:

- a. By no later than five Days after detecting a leak, Defendants shall perform a first attempt at repair;
- b. By no later than 15 Days after detection, Defendants shall perform a final attempt at repair;
- c. Defendants shall conduct Repair Verification Monitoring after repair of any leaks; and
- d. For all pressure relief devices placed on the DOR list, Defendants shall:
 - i. Require sign-off from the relevant process unit supervisor or person of similar authority that the pressure relief device is technically infeasible to repair without a process unit shutdown;
 - ii. Undertake quarterly Method 21 monitoring of pressure relief devices placed on the DOR list; and
 - iii. Repair the pressure relief devices within the time frame required by the applicable LDAR regulation.

85. If Defendants detect leaks of any such pressure relief device above 500 ppm in two consecutive quarterly monitoring periods for the Bluestone Facility, Defendant shall install

an Isolation Valve upstream of the pressure relief device within 30 Days, or as soon as reasonably practicable thereafter, of identifying the second leak.

86. Defendants subject to Paragraphs 84 and 85 above shall maintain the following records:

a. For each Natural Gasoline Storage Vessel subject to Paragraph 83, dates of each Method 21 monitoring event of each pressure relief valve on such vessel and identification;

b. Dates of first attempt and final attempts at repair, or indication of pressure relief valve being placed on the DOR list; and

c. Date that an Isolation Valve was installed on the Natural Gasoline Storage Vessel, as appropriate.

I. Large Hot Oil Heaters Subject to NSPS Db

87. Each steam generating unit at a Covered Facility with a design firing rate greater than 29 Megawatts (100 million British thermal units (“MMBtu/h”)) (“Large Hot Oil Heaters”), shall comply with 40 C.F.R. § 60.40b-49b (NSPS Subpart Db) as set forth below.

88. By no later than 180 Days after the Effective Date, Defendants shall submit an initial notification for each Large Hot Oil Heater subject to Paragraph 87, above, in accordance with 40 C.F.R. § 60.49b.

89. Defendants may rely on the results of the initial performance tests and existing developed predictive emission monitoring system (“PEMS”) plans of three Large Hot Oil Heaters at the Hopedale and Houston Facilities in accordance with 40 C.F.R. § 60.46b. All other Large Hot Oil Heaters including heaters installed during the life of this Consent Decree, may rely

on an existing performance test and use a developed PEMS plan from another heater under this Consent Decree, as long as the performance test results and PEMS plan being applied were conducted and developed for a similar Large Hot Oil Heater with the same burner design. Heaters currently in the MarkWest system can use the following tests and PEMS plans:

Heater	Performance Test and PEMS Plans
Cadiz H-1782	Houston 3
Hopedale C	Hopedale C
Hopedale D	Hopedale D
Hopedale Hot Oil # 6	Houston 3
Houston 3 Hot Oil; De-Ethanizer	Houston 3
Houston Frac Hot Oil-H-781	Houston 3
Houston De-Ethanizer Hot Oil H-1741	Houston 3
Majorsville De-Ethanizer Hot Oil H-2782	Houston 3
Majorsville De-Ethanizer Hot Oil H-1782	Houston 3
Sherwood De-Ethanizer Hot Oil	Houston 3

90. Beginning no later than 365 Days after the Effective Date of this Consent Decree, Defendants shall continuously comply with the nitrogen oxides (“NOx”) limit of 0.10 lb/MM Btu for all Large Hot Oil Heaters as required by 40 C.F.R. § 60.44b(a).

91. To demonstrate compliance with the limit of 0.10 lb/MM Btu for Large Hot Oil Heaters, Defendants shall monitor operating conditions to predict NOx emission rates using a PEMS as required by 40 C.F.R. § 60.48b(g)(2) as follows:

a. By no later than 365 Days after the Effective Date of this Consent Decree, and annually thereafter, Defendants shall monitor each heater using the PEMS plan specified for such heater in Paragraph 89, above, and maintain compliance with the appropriate PEMS operating parameter limits set forth below. Defendants shall conduct a relative accuracy test audit (“RATA”) to confirm PEMS model performance as required by 40 C.F.R. § 60.46b(j)(12) and Performance Specification 16 (PS-16).

Test site	Stack Oxygen (“O ₂ ”)	Maximum Stack Temperature	Dewpoint	Fuel Flow (Standard Cubic Feet per Hour)
Hopedale C	3%-8%	394F -429F	46-73 °F	128,361 – 169,209
Hopedale D	3%-8%	447F -476F	36-68 °F	133,337 – 145,541
Houston 3	3%-8%	620F -675F	34-68 °F	Not Applicable

b. Defendants will monitor the following PEMS parameters: Stack O₂; Dewpoint; and either Fuel Flow or Maximum Stack Temperature.

c. Pursuant to PS-16 Section 6.1.4, the Dewpoint (relative humidity) correlations developed may be extrapolated to values outside those experienced during the testing.

d.

- i. Beginning no later than 365 Days after the Effective Date of this Consent Decree, Defendants shall perform any additional testing necessary to ensure PEMS parameter ranges are sufficient for all heaters listed in Paragraph 89;
- ii. By no later than 730 Days after the Effective Date of this Consent

Decree, if any additional testing was performed on any heater, Defendants shall conduct a RATA to confirm PEMS model performance as required by PS-16 for each heater where additional testing was performed; and

- iii. Defendants shall submit in the next Annual Report required by Section VIII of the Consent Decree results of any additional testing, including expanded PEMS parameter ranges or modified PEMS models for any heaters listed in Paragraph 89. Unless within 90 Days after receipt of such additional testing results, EPA disapproves all or part of such results, such results shall be deemed approved. PEMS parameters will revert to the original PEMS model results in Paragraph 91.a., above, by no later than 60 days after Defendants receive EPA's formal disapproval letter.
- iv. If major operational changes occur, or in the case of a failed RATA, Defendants shall retest the affected heater within 60 days at new or changed parameters following the procedures in Paragraph 91 above.

e. All PEMS model development or parameter updating and resulting RATA testing conducted pursuant to this Consent Decree shall follow the procedures set forth in PS-16, and the following general procedures, as applicable:

- i. Collect data. Collect NO_x and O₂ emission data over the desired range of the operating parameter of interest. In accordance with

EPA Reference Method 7E Section 8.5, Defendants may use an appropriate time interval between the bias or calibration checks completed during testing. As specified in Method 7E, if the post-test bias check fails, data is invalid from the time of the last successful bias check to the time of the next successful bias check. In accordance with Method 7E Section 8.5(2), each post-test bias check may serve as the pre-test bias check for the next period of data collection. When the analyzers are operated in the manner described in this Paragraph, an initial RATA is not required since the reference method itself is being used. In accordance with Method 7E Section 8.4(3), a multi-hole probe may be used with the analyzer system to meet the sampling point requirements of Method 7E.

- ii. Divide the data. Once all the data are collected, such data shall be divided into two groups: Group 1 data is used to build or modify the model; and Group 2 data is used to validate the model. Once the model is built or modified, the Group 2 data, which consists of valid EPA reference method (Method 7E) runs, is used to conduct a RATA on the new or modified model.
- iii. Validate model. Once an acceptable model has been developed using the Group 1 data, the model shall be validated with a RATA in accordance with PS-16 Section 8.2. The Group 2 data collected

earlier may be used for the reference method runs for model validation. Model validation procedures in PS-16 for an excess emission PEMS shall be used. In no case shall Group 1 data used to build or modify the model also be used to validate the model.

92. Defendants shall calculate a 30-day rolling average from average daily NOx emissions calculated by the PEMS on an hourly basis.

a. Each daily NOx average is considered valid if 75% of the hourly average PEMS parameters data falls within the ranges specified in the table in Paragraph 91.a., above, or those established through additional testing and RATAs as described in Paragraph 91.d. and 91.e., above.

b. A minimum of 22 valid days of data are needed for each 30-day averaging period.

93. Recordkeeping. Defendants must maintain emissions monitoring of all required parameters per 40 C.F.R. § 60.49b(c) for each Large Hot Oil Heater subject to Paragraph 91, above, to demonstrate compliance with Paragraph 91, above.

J. Small Hot Oil Heaters Subject to NSPS Dc

94. a. By no later than 180 Days after the Effective Date, each steam generating unit at a Covered Facility with a design firing rate less than 29 Megawatts (100 MMBtu/h) or less, but greater than or equal to 2.9 Megawatts (10 MMBtu/h) (“Small Hot Oil Heaters”), shall comply with 40 C.F.R. § 60.40c-48bc (NSPS Subpart Dc) as set forth below.

b. By no later than 180 Days after the Effective Date, Defendants shall

submit an initial notification for each Small Hot Oil Heater subject to Paragraph 94.a., above, in accordance with 40 C.F.R. § 60.48c.

95. Recordkeeping. Beginning no later than 180 Days after the Effective Date of this Consent Decree, Defendants shall measure or estimate and record, in accordance with 40 C.F.R. § 60.48c(g)(2), fuel usage during each calendar month by each Small Hot Oil Heater. The maximum design heat rate may be used to estimate heater fuel flow rate per 40 C.F.R. § 60.46c(g)(3).

K. Compressor Stations Mitigation Projects

96. By no later than 180 Days after the Effective Date, Defendants shall implement and commence operation of the Environmental Mitigation Projects set forth in Paragraph 97 for the purpose of reducing emissions of VOCs from two natural gas compressor stations, one in Pennsylvania and one in Ohio, through installation and operation of VOC emission control measures for truck loading operations (“Compressor Stations Mitigation Projects”). In implementing the Compressor Stations Mitigation Projects, Defendants shall spend no less than \$700,000 in Project Dollars, and comply with Paragraphs 97 and 98.

97. By no later than 180 Days of the Effective Date, the Defendants shall purchase and install an Air Defender System at the Carpenter Compressor Station located in Donegal Township, Pennsylvania and the Humphreys Compressor Station located near Barnesville, Ohio.

98. By no later than 90 Days of installing the Air Defender Systems, the Defendants must verify that each system is operating properly in accordance with manufacturer specifications.

99. By signing this Consent Decree, each Defendant certifies that it and any other

owners or operators of the natural gas compressor stations affected by these Compressor Stations Mitigation Projects, and each Defendant and any other owners or operators of a Covered Facility with a Fin Fan Unit(s) subject to the monitoring requirements in Paragraphs 69-73, are not required to perform or develop these Environmental Mitigation Projects by any federal, state, or local law or regulation and are not required to perform or develop these Projects by agreement, grant, or as injunctive relief awarded in any other action in any forum; that these Projects are not ones that they were intending to construct, perform, or implement other than in settlement of the claims resolved by this Decree; and that they will not receive any reimbursement for any portion of the costs of these Projects from any other person.

100. Compressor Stations Mitigation Projects Progress and Completion Reports.

Defendants shall include in each report required under Section VIII (Reporting), a status update on the Compressor Stations Mitigation Projects required by this Section until the Projects are completed. In addition, the report required by Section VIII for the period in which the Projects are completed shall contain the following information:

- a. A detailed description of the Projects as implemented;
- b. A description of any problems encountered in completing the Projects and the solutions thereto;
- c. An itemized list of all eligible Project costs expended;
- d. To the extent feasible, a description of the environmental and public health benefits resulting from implementation of the Projects (with a quantification of the benefits and an estimate (i.e., tons per year) of the pollutant reductions); and
- e. A certification that the Projects have been fully implemented pursuant to

the provisions of this Decree.

**VI. INCORPORATION OF CONSENT DECREE REQUIREMENTS INTO
FEDERALLY ENFORCEABLE PERMITS**

101. Permits Needed to Meet Compliance Obligations.

a. If any compliance obligation under Section V of this Consent Decree (Injunctive Relief) requires Defendants to obtain a federal, state, or local permit or approval, Defendants shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. All applications must be submitted within 3 years of the Effective Date of this Consent Decree. Any permit required under State law must comply with all applicable State statutory and regulatory requirements for obtaining such permit.

b. Permits to be Issued by the Pennsylvania Department of Environmental Protection. In the event that Defendant(s) is required to obtain any permits from the Pennsylvania Department of Environmental Protection (“PADEP”) in order to comply with the requirements of the Consent Decree, the following provisions apply to the consideration and review of such applications for such permits.

- i. The standard for review of any permit application submitted to PADEP pursuant to the terms of this Consent Decree is whether it complies with all applicable statutory and regulatory requirements. PADEP will review and act on such permit applications only after the Defendant submits an application that complies with all statutory and regulatory requirements.
- ii. Notwithstanding the provisions of Paragraphs 151-158 and 173,

the parties agree that any PADEP action on a permit application is discretionary and that any challenges to PADEP's issuance or denial of or inaction on a permit application must be filed with the Pennsylvania Environmental Hearing Board, the tribunal established by Pennsylvania statute to review all PADEP actions.

102. Permits to Ensure Survival of Consent Decree Limits and Standards after Termination of Consent Decree.

- a. Prior to termination of this Consent Decree, Defendants shall submit complete applications, amendments, and/or supplements for all Covered Facilities to incorporate as "applicable requirements" the limits and standards consistent with the compliance parameters specified in the referenced Paragraph 102(b) into a non-Title V, federally enforceable permits that will survive termination of this Consent Decree to applicable permitting authorities.
- b. The limits and standards imposed by the following sub-Paragraphs of this Consent Decree and its Appendices shall be incorporated into non-Title V, federally enforceable permits prior to Termination:
 - i. Subpart OOOO as it applies to gas processing plants (Paragraph 19 of this Consent Decree);
 - ii. Pilot-Operated Modulating Pressure Relief Valves (Paragraphs 59-61 of this Consent Decree);
 - iii. Subpart NNN as it applies to process units that are affected facilities (Paragraph 67 of this Consent Decree);

- iv. Enclosed Combustion Devices (Paragraph 74 of this Consent Decree);
- v. Hose Connections to Railcar/Truck Loading Operations (Paragraphs 79-80 of this Consent Decree);
- vi. Natural Gasoline Storage Vessels (Paragraphs 83-84 of this Consent Decree);
- vii. Subpart Db as it applies to affected Large Hot Oil Heaters (Paragraph 87 of this Consent Decree); and
- viii. Subpart Dc as it applies to affected Small Hot Oil Heaters (Paragraph 94 of this Consent Decree).

103. Modifications to Title V Operating Permits. Prior to termination of this Consent Decree, Defendants shall, for any Covered Facility with a Title V Operating Permit, submit complete applications to applicable permitting authorities to modify, amend or revise such Title V permit to incorporate the applicable limits and standards identified in the preceding Paragraph into the Title V Permit. The Parties agree that the incorporation of these emission limits and standards into Title V Permits shall be done in accordance with applicable state or local Title V rules. The Parties agree that the incorporation may be by “amendment” under 40 C.F.R. § 70.7(d) and analogous state Title V rules, where allowed by state law.

VII. SUPPLEMENTAL ENVIRONMENTAL PROJECTS

104. VOC Fence Line Monitoring System. Defendants shall implement as a Supplemental Environmental Project (“SEP”) the installation, operation and maintenance of speciated VOC fence line systems at the Houston Facility, Siloam Facility, Sherwood Facility,

and Carthage Facility, to monitor certain pollutants, and to provide the data to EPA and the Applicable State Co-Plaintiff (“Fence Line Monitoring System SEP” or “FLMS SEP”).

Defendants shall implement the FLMS SEP in accordance with this Paragraph and the criteria, terms and procedures in Appendix B. Defendants shall spend not less than \$2.5 million in Project Dollars to implement the FLMS SEP.

105. Defendants are responsible for the satisfactory completion of the FLMS Monitoring SEP in accordance with the requirements of this Consent Decree. Defendants may use contractors or consultants in planning and implementing the SEP.

106. Predictive Leak Monitoring: Predictive leak modeling software (“PLMS”) is a modeling software that uses process operations criteria along with stream compositions to predict leak probability of process equipment from fugitive emission leaks. By no later than 365 Days after the Effective Date, Defendants shall perform a leak study using PLMS (PLMS SEP) to identify LDAR leaks at the Seneca Facility. Defendants shall spend not less than \$75,000 in Project Dollars to implement the PLMS SEP. Within 180 Days after completion of the leak study, Defendants shall submit a report to EPA that includes the following:

- a. A summary of the utilized PLMS including inputs and variables;
- b. Leaks predicted by the PLMS model compared to the periodic Method 21 monitoring required by the Consent Decree; and
- c. Any material conclusions or lessons learned by Defendants from the leak study.

107. With regard to the FLMS SEP and the PLMS SEP, Defendants certify the truth and accuracy of each of the following:

a. That all cost information provided to EPA in connection with each SEP is complete and accurate and that Defendants in good faith estimate that the cost to implement the FLMS and PLMS SEP is at least \$2.525 million.

b. That, as of the date of executing this Consent Decree, Defendants are not required to perform or develop each SEP by any federal, state, or local law or regulation and are not required to perform or develop each SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;

c. That each SEP is not a project that Defendants were planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Consent Decree;

d. That Defendants have not received and will not receive credit for each SEP in any other enforcement action;

e. That Defendants will not receive any reimbursement for any portion of each SEP from any other person;

f. That Defendants are not a party to any open federal financial assistance transaction that is funding or could fund the same activity as each SEP. For purposes of these certifications, the term “open federal financial assistance transaction” refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee, or other mechanism for providing federal financial assistance whose performance period has not yet expired.

108. SEP Completion Report. Within thirty (30) Days after completion of each FLMS and PLMS SEP, Defendants shall submit a SEP Completion Report to the United States and the

Applicable State Co-Plaintiff in accordance with Section IX (Notices) of this Consent Decree.

Each SEP Completion Report shall contain the following information:

- a. A detailed description of the SEP as implemented and, with respect to the PLMS SEP, the leak study information required in Paragraph 106.
- b. A description of any problems encountered in completing the SEP and solutions thereto;
- c. An itemized list of all eligible SEP costs expended;
- d. Certification that the SEP has been fully implemented pursuant to the provisions of this Decree; and
- e. To the extent feasible, a description of the environmental or public health benefits resulting from implementation of the SEPs.

109. The United States may, in its sole discretion, require Defendants to provide information in addition to that described in Paragraph 108 (SEP Completion Report) in order to evaluate Defendants' SEP Completion Report.

110. After receiving a SEP Completion Report, the United States will notify Defendants whether or not Defendants have satisfactorily completed the SEP. If Defendants have not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section XI (Stipulated Penalties) of this Consent Decree.

111. Defendants may invoke dispute resolution under Section XIII of the Decree (Dispute Resolution) regarding EPA's determination of (i) whether Defendants have satisfactorily performed a SEP and (ii) the amount of eligible SEP costs. No other disputes arising under this Section are subject to Dispute Resolution.

112. Defendants shall ensure that each submission required under this Section is signed by a Defendant official with knowledge of the SEP and bears the certification language set forth in Paragraph 120.

113. If Defendants reference the SEPs under this Consent Decree in any press conference, press release, or similar formal public statement, Defendants shall include language in substantially the following form: “This project was undertaken in connection with the settlement of an enforcement action under the Clean Air Act brought by the United States, the State of Oklahoma, PADEP, and the State of West Virginia against certain MarkWest entities.”

114. For federal income tax purposes, Defendants agree that they will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing each SEP.

VIII. REPORTING REQUIREMENTS

115. After the Effective Date and until termination of this Decree pursuant to Section XX (Termination), Defendants shall submit periodic reports on the status of the injunctive relief, SEPs, and other reporting required by the Consent Decree to EPA Headquarters, the EPA Regional Office(s), and the Applicable State Co-Plaintiff(s). The initial such status report shall cover the first 365-Day period after the Effective Date and shall be due within thirty (30) Days after the end of the 365-Day period. Each subsequent status report shall cover a one (1) year period and shall be due within thirty (30) Days after the end of the annual period covered. Each status report shall contain the following information:

a. Initial Compliance Status Report (“Initial Compliance Report”).

Defendants shall submit a written, Initial Compliance Report that shall contain information on Consent Decree implementation since the Effective Date. Defendants

shall include in the Initial Compliance Report information on all reporting obligations set forth in this Consent Decree and its appendices, including:

- i. Section V (Injunctive Relief). The status of compliance with Section V, including the information required by:
 1. Paragraphs 19-20 (Applicability of Subpart OOOO and initial connector monitoring);
 2. The information required under Paragraph 58 for implementation of LDAR Program requirements;
 3. The information required under Paragraph 66 for implementation of PORV requirements;
 4. The information required to demonstrate compliance with Paragraph 68 (NSPS Subparts NNN);
 5. For Fin Fan Units, any plug leaks that were not repaired within 15 Days as required by Paragraph 72;
 6. For Enclosed Combustors: (i) any deviations in minimum operating temperature based on the averaging periods required by Paragraph 75; and (ii) any time periods that Defendants did not record every 15 minutes as required by Paragraph 76;
 7. For Railcar and Truck Hose Connections, any leaks that were not repaired within 15 Days as required by Paragraph 80;

8. For Natural Gasoline Storage Vessels: (i) any leaks that were not repaired within 15 Days for a Natural Gasoline Storage Vessel as required by Paragraph 84; and (ii) the date of installation of an Isolation Valve for each Natural Gasoline Storage Vessel;
 9. For Large Hot Oil Heaters, any deviations in the parametric monitoring as required by Paragraph 91; and
 10. For Small Hot Oil Heaters, any failure to maintain monthly fuel usage as required by Paragraph 95.
 11. The status of the Compressor Stations Mitigation Projects in accordance with Paragraphs 97-98;
- ii. Section VII (Supplemental Environmental Projects). The status of each of the SEP projects in Section VII (Supplemental Environmental Projects) in accordance with Appendix B and Paragraphs 104 and 106;
- iii. Other Reporting Requirements:
1. The status of completion of milestones, including a compliance table that lists each milestone set forth in this Consent Decree, each milestone's required completion date, and the date Defendant completes each milestone;
 2. The status of permits and permit applications as set forth in Section VI (Incorporation of Consent Decree Requirements

into Federally-Enforceable Permits), including copies of any submitted permit applications, state-proposed permits, and issued permits; and

3. A description of any problems encountered or anticipated, together with proposed solutions.

b. Subsequent Compliance Status Report (“Annual Compliance Report(s)”).

By no later than 365 Days after the filing of the Initial Compliance Report as set forth in Subparagraph a, until termination of this Decree pursuant to Section XX (Termination), Defendants shall submit a written Annual Compliance Report that shall contain information on implementation of this Consent Decree for the preceding year. Each Annual Compliance Report shall cover a one (1) year period and shall be due within thirty (30) Days after the end of the annual period covered.

116. Each report submitted by Defendants under this Section shall also include a description of any noncompliance with the requirements of this Consent Decree and an explanation of the noncompliance’s likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such noncompliance. If the cause of a noncompliance cannot be fully explained at the time the report is due, Defendants shall so state in the report. Defendants shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Defendants become aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Defendants of their obligation to provide the notice required by Section XII (Force Majeure).

117. All Reports under this Consent Decree shall be submitted to EPA in the manner designated in Section IX (Notices) of this Consent Decree.

118. The reporting requirements of this Consent Decree do not relieve Defendants of any reporting obligations required by the CAA or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement. The reporting requirements of this Section are in addition to any other reports, plans, or submissions required by other Sections of this Consent Decree.

119. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting a Defendant's performance under this Decree, or the performance of a Covered Facility, may pose an immediate threat to the public health or welfare or the environment, Defendants shall notify EPA and the Applicable State Co-Plaintiff orally or by electronic transmission as soon as possible, but no later than 24 hours after Defendants first knew of the non-compliance or event. This procedure is in addition to the requirements set forth in the preceding Paragraph.

120. Each report submitted by Defendants under this Section shall be signed by a Defendant's official (head of those responsible for environmental management and compliance) and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

121. This certification requirement does not apply to emergency or similar notifications where compliance would be impractical.

122. [Reserved]

123. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

IX. NOTICES

124. Each report, study, notification, or other communications between Parties to this Consent Decree shall be submitted as specified in this Paragraph and Paragraphs 127-129 below. Where this Consent Decree requires that notices and submissions are to be made to the “United States” they shall be made to the U.S. Department of Justice, EPA Headquarters, and the EPA Regional Office(s) for the Covered Facility or Facilities the submission concerns. Where this Consent Decree requires that notices and submissions are to be made to an Applicable Co-Plaintiff(s), they shall be made to the Applicable Co-Plaintiff(s) and/or Permitting Authority for the jurisdiction(s) in which the Covered Facility or Facilities are located.

125. Unless otherwise provided herein, notifications to or communications between the Parties shall be deemed submitted on the date they are postmarked and sent by U.S. Mail, postage pre-paid, or shipped by a delivery service with confirmation of delivery, except for notices under Section XII (Force Majeure) and Section XIII (Dispute Resolution) which shall be sent either by overnight mail or by certified or registered mail, return receipt requested.

126. If the date for submission of a report, study, notification, or other communication falls on a Saturday, Sunday, or legal holiday, the report, study, notification, or other

communication shall be deemed timely if it is submitted the next Day.

127. Where an e-mail address is provided below, Defendants may submit any reports, notification, certifications, or other communications required by this Consent Decree electronically (other than submission of a permit application required by this Consent Decree, payment of penalties under Section IV or Section XI (Stipulated Penalties) and notices under Section XII (Force Majeure) and Section XIII (Dispute Resolution) in lieu of submission by U.S. Mail. Electronic submissions shall be deemed submitted on the date they are transmitted electronically. Any report, notification, certification, or other communication that cannot be submitted electronically shall be submitted in hard-copy as provided in this Section IX.

128. Except as otherwise provided herein, all reports, notifications, certifications, or other communications required or allowed under this Consent Decree to be submitted or delivered to the United States, EPA, Applicable EPA Regional Office, the State Co-Plaintiffs, and Defendants shall be addressed as follows:

As to the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, DC 20044-7611
Re: DOJ No. 90-5-2-1-11374/1

Overnight Address:
601 D. Street N.W.
Washington, DC 20004

EPA Headquarters

Director, Air Enforcement Division
Office of Civil Enforcement
U.S. Environmental Protection Agency

Mail Code 2242-A
1200 Pennsylvania Avenue N.W.
Washington, DC 20460-0001

Electronic copies to:
palmero.mark@epa.gov

EPA Regions

Region 3:

Associate Director
Office of Air Enforcement & Compliance Assistance
EPA Region 3
Mailcode 3AP20
1650 Arch Street
Philadelphia, PA 19103

and

Office of Regional Counsel, Air Branch
EPA Region 3
Mailcode 3RC10
1650 Arch Street
Philadelphia, PA 19103

Electronic copies to:
augustine.bruce@epa.gov

Region 4:

Air, Pesticides and Toxics Management Division
North Air Enforcement and Toxics Section
U.S. EPA Region 4
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

and

Office of Regional Counsel
EPA Region 4
61 Forsyth Street, S.W.

Atlanta, Georgia 30303

Region 5:

Air and Radiation Division
EPA Region 5
77 W. Jackson Blvd. (AE-17J)
Chicago, IL 60604
Attn: Compliance Tracker

and

Office of Regional Counsel
EPA Region 5
77 West Jackson Blvd. (C-14J)
Chicago, IL 60604

Electronic copies to:
loukeris.constantinos@epa.gov
mcauliffe.mary@epa.gov
r5ardreporting@epa.gov

Region 6:

Air Consent Decree Coordinator
Air Enforcement Branch
EPA Region 6
1445 Ross Avenue, Suite 1200, Mail Code 6EN-A
Dallas, TX 75202-2733

and

Office of Regional Counsel
EPA Region 6
1445 Ross Avenue, Suite 1200, Mail Code 6RC-EA
Dallas, TX 75202-2733

Electronic copies to:
R6CAACDDeliverables@epa.gov
zequeira.c@epa.gov

Notice or submission to State Co-Plaintiffs:

State of Oklahoma:

Eddie Terrill, Director
Air Quality Division
707 N. Robinson
P.O. Box 1677
Oklahoma City, OK 73101-1677

PADEP

Mark R. Gorog, P.E.
Regional Manager
Department of Environmental Protection
Air Quality Program
Southwest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222
Phone: 412.442.4150
Fax: 412.442.4194
mgorog@pa.gov

and

Lori McNabb
Environmental Group Manager
Department of Environmental Protection – Field Operations
Air Quality Program
Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335
Phone: 814.332.6634
Fax: 814.332.6121
lmcnabb@pa.gov

State of West Virginia

West Virginia Division of Air Quality
Attn: Compliance and Enforcement Section
601 57th Street SE
Charleston, WV 25304

Notice or submission as to Defendants:

General Counsel
MPLX LP

539 South Main Street
Findlay, OH 45840

Managing Counsel – Operations
MarkWest Energy Partners, L.P.
1515 Arapahoe St., Suite 1600
Denver, CO 80202

Electronic copies to:
lawdepartment.notices@markwest.com
christopher.rimkus@markwest.com

129. Any Party may change either the notice recipient or the address for providing notices to it by serving all other parties with a notice setting forth such new notice recipient or address. In addition, the nature, means of submission (e.g., electronic instead of paper copies), and frequency of reports required by this Consent Decree may be modified by mutual consent of the Parties. The consent of the United States to such modification shall be in the form of a written notification from EPA, but need not be filed with the Court to be effective.

X. APPROVAL OF DELIVERABLES

130. After review of any plan, report, or other item that is required to be submitted pursuant to this Consent Decree, EPA after consultation with the Applicable State Co-Plaintiff shall in writing: (a) approve the submission; (b) approve the submission upon specified conditions; (c) approve part of the submission and disapprove the remainder; or (d) disapprove the submission.

131. If the submission is approved pursuant to Paragraph 130(a), Defendants shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally approved or approved only in part pursuant to Paragraph 130(b) or (c), Defendants

shall, upon written direction from EPA after consultation with the Applicable State Co-Plaintiff, take all actions required by the approved plan, report, or other item that EPA after consultation with the Applicable State Co-Plaintiff determines are technically severable from any disapproved portions, subject to Defendants' right to dispute only the specified conditions or the disapproved portions, under Section XIII (Dispute Resolution).

132. If the submission is disapproved in whole or in part pursuant to Paragraph 130(c) or (d), Defendants shall, within 45 Days or such other time as the EPA and Defendants agree to in writing, correct all deficiencies and resubmit the plan, report, or other item, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved in whole or in part, Defendants shall proceed in accordance with the preceding Paragraph.

133. If a resubmitted plan, report, or other item, or portion thereof, is disapproved in whole or in part, EPA after consultation with the Applicable State Co-Plaintiff may again require Defendants to correct any deficiencies, in accordance with the preceding Paragraphs, or may itself correct any deficiencies subject to Defendants' right to invoke Dispute Resolution and the right of EPA after consultation with the Applicable State Co-Plaintiff to seek stipulated penalties.

134. Any stipulated penalties applicable to the original submission, as provided in Section XI (Stipulated Penalties), shall accrue during the 45 Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided that, if the original submission was so deficient as to constitute a material breach of Defendants' obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

XI. STIPULATED PENALTIES

135. Stipulated penalties shall be paid to the United States and to the Applicable State Co-Plaintiffs for each failure by a Defendant to comply with the terms of this Consent Decree as provided herein at any Covered Facility where the Defendant is responsible for compliance under Paragraph 11 above. These stipulated penalties shall be split 50% to the United States, and 50% to the Applicable State Co-Plaintiff. Where more than one Defendant is responsible for compliance with respect to a Covered Facility, asset, and/or equipment that it owns or operates at a Covered Facility, there shall be only one stipulated penalty assessed per violation against the Defendants responsible for compliance for which they shall be jointly and severally liable. Stipulated penalties shall be calculated in the amounts specified in this Section XI.

136. [Reserved].

137. Demand for Stipulated Penalties. Subject to Section XIII (Dispute Resolution) or any order of the Court, the applicable Defendants shall pay stipulated penalties upon written demand by the United States no later than sixty (60) Days after a Defendant receives such a demand. Demand from the United States shall be deemed a demand from the appropriate Applicable State Co-Plaintiff, but the United States and the appropriate Applicable State Co-Plaintiff shall consult each other prior to making a demand. A demand for the payment of stipulated penalties shall identify the particular violation(s) to which the stipulated penalty relates, the stipulated penalty amount that the United States is demanding for each violation (as can be best estimated), the calculation method underlying the demand, and the grounds upon which the demand is based.

138. Payment of Stipulated Penalties. Any stipulated penalty demand shall identify to

which Plaintiff(s) payment shall be made. Stipulated Penalties owing to the United States of under \$10,000 shall be paid by check and made payable to “U.S. Department of Justice,” referencing DOJ case number 90-5-2-1-11374/1 and delivered to the U.S. Attorney’s Office in the Northern District of Ohio. Stipulated penalties owing to the United States of \$10,000 or more and stipulated penalties owing to any State Co-Plaintiff shall be paid in the manner set forth in Section IV (Civil Penalty). The transmittal letter required by Paragraph 14 shall specify that the payment is for stipulated penalties.

139. Failure to Pay Civil Penalty. If Defendants fail to pay any portion of the civil penalty required to be paid under Section IV of this Decree (Civil Penalty) when due, Defendants shall pay a stipulated penalty of \$5,000 per Day for each Day that the payment is late. Late payment of the civil penalty and any accrued stipulated penalties shall be made in accordance with Paragraph 14 above.

140. Failure to Meet all Other Consent Decree Obligations. Defendants shall be liable for stipulated penalties to the United States and/or the Applicable State Co-Plaintiff for violations of this Consent Decree at any Covered Facility where the Defendant is responsible for compliance under Paragraph 11 above unless excused under Section XII of this Consent Decree (Force Majeure). The payment of stipulated penalties and interest, if any, shall not alter in any way Defendants’ obligation to complete the performance of the requirements of this Consent Decree.

a. Violations of NSPS OOOO.

i. For failure to implement any applicable provision of Subpart OOOO for Covered Process Units in accordance with Paragraph

19.

<u>Period of Delay or Non-compliance</u>	<u>Penalty per Violation per Day</u>
1st through 15th Day	\$500
16th through 30th Day	\$1,000
31 Days or more	\$2,000

- ii. For failure to perform connector identification, tagging or inclusion in facility LDAR program databases, or initial connector monitoring in accordance with Paragraph 20: \$100 per component per missed connector, not to exceed \$95,000 per Covered Process Unit.

b. Violations of the LDAR Program Requirements at Covered Facilities.

The Defendant(s) responsible for compliance at each Covered Facility as specified in Paragraph 11 of this Consent Decree shall be liable for the following stipulated penalties for violations of the requirements of Section V.B (LDAR Program).

<u>Consent Decree Violation</u>	<u>Stipulated Penalty</u>	
i. <u>Violation of Paragraph 22.</u> Failure to timely develop and complete a written LDAR Document or failure to timely update the document on an annual basis as required.	<u>Period of noncompliance</u>	<u>Penalty per Day</u>
		<u>late</u>
	1 - 15 Days	\$300
	16 - 30 Days	\$400
	31 Days or more	\$500
ii. <u>Violation of Paragraph 23.</u> Each failure to perform monitoring at the frequencies set forth in Paragraph 23.	\$100 per component per missed monitoring event, not to exceed \$25,000 per 30-Day period per Covered Process Unit	

Consent Decree Violation	Stipulated Penalty		
iii. <u>Violation of Paragraph 24 or 26.</u> Each failure to comply with Method 21 or, if applicable, an AWP, in performing LDAR monitoring,	Monitoring frequency <u>for the component</u>	Penalty per monitoring <u>event per process unit</u>	
	Annual	\$20,000	
	Quarterly	\$10,000	
	Monthly	\$5,000	
iv. <u>Violation of Paragraph 24 and 25 (use of datalogger).</u> For each failure to use a monitoring device that is attached to a datalogger and for each failure, during each monitoring event, to directly electronically record the Screening Value, date, time, identification number of the monitoring instrument, and the identification of technician, in accordance with Paragraphs 24 and 25.	\$100 per failure per piece of equipment monitored		
v. <u>Violation of Paragraph 24 (monitoring data transfer).</u> Each failure to transfer monitoring data to an electronic database on at least a weekly basis.	\$150 per Day for each Day that the transfer is late		
vi. <u>Violation of Paragraph 28 (First Attempt at Repair).</u> Each failure to timely perform a first repair as required by Paragraph 28. For purposes of these stipulated penalties, the term “repair” includes the required Repair Verification Monitoring in Paragraph 29 after the repair attempt; the stipulated penalties in Subparagraph 141.viii do not apply.	\$150 per Day for each late Day, not to exceed \$1,500 per leak		
vii. <u>Violation of Paragraph 28 (Final Attempt at Repair).</u> Each failure to timely perform a final attempt at repair as required by Paragraph 28 unless not required to do so under Paragraph 33 (Delay of Repair). For purposes of these stipulated penalties, the term “repair” includes the required Repair Verification Monitoring in Paragraph 26 after the repair attempt; the stipulated penalties in Subparagraph 141.viii do not apply.	<u>Equipment type</u>	<u>Penalty per component per Day late</u>	<u>Not to exceed</u>
	Valves	\$300	\$45,000
	Pumps	\$1,200	\$150,000

Consent Decree Violation	Stipulated Penalty		
viii. <u>Violation of Paragraph 29.</u> Each failure to timely perform Repair Verification Monitoring as required by Paragraph 29ll in circumstances where the first attempt to adjust, or otherwise alter, the piece of equipment to eliminate the leak was made within five Days and the final attempt to adjust, or otherwise alter, the piece of equipment to eliminate the leak was made within 15 Days.	<u>Equipment type</u>	<u>Penalty per component per Day late</u>	<u>Not to exceed</u>
	Valves	\$150	\$18,750
	Pumps	\$600	\$75,000
ix. <u>Violation of Paragraph 30.</u> Each failure to undertake the drill-and-tap method as required by Paragraph 30.	<u>Period of noncompliance</u>	<u>Penalty per component per Day late</u>	
	Between 1 and 15 Days	\$200	
	Between 16 and 30 Days	\$350	
	Over 30 Days	\$500 per Day for each Day over 30, not to exceed \$45,000	
x. <u>Violation of Paragraph 31.</u> Each failure to record the information required by Paragraph 31.	\$100 per component per item of missed information.		
xi. <u>Violation of Paragraph 33.</u> Each improper placement of a piece of Covered Equipment on the DOR list (e.g., placing a piece of Covered Equipment on the DOR list even though it is feasible to repair it without a process unit shutdown) required by Paragraph 33.	<u>Equipment type</u>	<u>Penalty per component per Day on list</u>	<u>Not to exceed</u>
	Valve	\$300	\$75,000
	Pumps	\$1,200	\$300,000
xii. <u>Violation of Subparagraph 33.a.</u> Each failure to comply with the requirement in Subparagraph 33.a. that a relevant unit supervisor or person of similar authority sign off on placing a piece of Covered Equipment on the DOR list.	\$250 per piece of Covered Equipment.		
xiii. <u>Violation of Subparagraph 33.c.i.</u> Each failure to comply with the requirements of Subparagraph 33.c.i.	Refer to the applicable stipulated penalties in Subparagraphs 140.b.vi. and vii.		

Consent Decree Violation	Stipulated Penalty
xiv. <u>Violation of Subparagraph 33.c.ii.</u> Each failure to comply with the requirements of Subparagraph 33.c.ii.	Refer to the applicable stipulated penalties in Subparagraph 140.b.xviii.
xv. <u>Violation of Paragraph 36.</u> Each failure to comply with the work practice standards in Paragraph 36.	\$50 per violation per valve per Day, not to exceed \$30,000 for all valves in a Covered Process Unit per Quarter.
xvi. <u>Violation of Paragraph 37.</u> Each failure to install a Low-E Valve or a valve fitted with Low-E Packing when required to do so pursuant to Paragraph 37.	\$20,000 per failure, except as provided in Paragraph 130.b.xviii.
xvii. <u>Violation of Subparagraph 38.</u> Each failure, in violation of Subparagraph 38.b., to timely comply with the requirements relating to installing a Low-E Valve or Low-E Packing if a process unit shutdown is not required.	\$500 per Day per failure, not to exceed \$20,000 per failure, except as provided in Paragraph 141, below.
xviii. <u>Violation of Subparagraph 38c.</u> Each failure, in violation of Subparagraph 38.c., to install a Low-E Valve or Low-E Packing when required to do so during a process unit shutdown.	\$20,000 per failure, except as provided in Paragraph 141, below.
xix. <u>Violation of Paragraph 45.</u> Each failure to comply with the requirements regarding the replacement, improvement, or repair requirements for connectors under Paragraph 45.	\$100 per Day per failure, not to exceed \$5,000 per failure.
xx. <u>Violation of Paragraph 46 (Covered Equipment Addition).</u> Each failure to add a piece of Covered Equipment to the LDAR program when required to do so pursuant to the evaluation required by Paragraph 46.	\$300 per piece of Covered Equipment (plus an amount, if any, due under Subparagraph 140.b.iii for any missed monitoring event related to a component that should have been added to the LDAR program but was not).
xxi. <u>Violation of Paragraph 46 (Covered Equipment Deletion).</u> Each failure to remove a piece of Covered Equipment from the LDAR program when required to do so pursuant to Paragraph 46.	\$150 per failure per piece of Covered Equipment.
xxii. <u>Violation of Paragraph 47 (Training Protocol).</u> Each failure to timely develop a training protocol as required by Paragraph 47.	\$50 per Day late.

Consent Decree Violation	Stipulated Penalty										
xxiii. <u>Violation of Paragraph 47 (Personnel Training)</u> . Each failure to perform initial, refresher, or new personnel training as required by Paragraph 47.	\$1,000 per person per month late.										
xxiv. <u>Violation of Paragraph 48</u> . Each failure of a monitoring technician to complete the certification required in Paragraph 48.	\$100 per failure per technician.										
xxv. <u>Violation of Paragraph 49</u> . Each failure to perform any of the requirements relating to QA/QC in Paragraph 49.	\$1,000 per missed requirement per Quarter.										
xxvi. <u>Violation of Paragraph 50</u> . Each failure to conduct an LDAR Audit for a Covered Facility in accordance with the schedule set forth in Paragraph 50.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day</u></th></tr> <tr> <td>1-15 Days</td><td>\$300</td></tr> <tr> <td>16-30 Days</td><td>\$400</td></tr> <tr> <td>31 Days or more</td><td>\$500, not to exceed \$100,000 per LDAR Audit</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day</u>	1-15 Days	\$300	16-30 Days	\$400	31 Days or more	\$500, not to exceed \$100,000 per LDAR Audit		
<u>Period of noncompliance</u>	<u>Penalty per Day</u>										
1-15 Days	\$300										
16-30 Days	\$400										
31 Days or more	\$500, not to exceed \$100,000 per LDAR Audit										
xxvii. <u>Violation of Paragraph 51</u> . Each failure to use a third party as an auditor as required under Paragraph 51; each use of auditor that is not experienced in LDAR Audits; and each use of Defendant's regular LDAR contractor or LDAR Personnel for a Covered Facility to conduct a LDAR Audit for such Covered Facility, in violation of the requirements of Paragraph 51.	\$25,000 per LDAR Audit.										
xxviii. <u>Violation of Paragraph 52</u> . Except for the requirement to undertake Comparative Monitoring, each failure to comply with the LDAR Audit requirements in Paragraph 52.	\$100,000 per LDAR Audit.										
xxix. <u>Violation of Paragraph 53</u> . Each failure to comply with the Comparative Monitoring requirements of Paragraph 53.	\$50,000 per LDAR Audit.										
xxx. <u>Violation of Subparagraph 55.b (Corrective Action Plan Submittal)</u> . Each failure to timely submit a Corrective Action Plan that conforms to the requirements of Subparagraph 55.a.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day per violation</u></th></tr> <tr> <td>1-15 Days</td><td>\$100</td></tr> <tr> <td>16-30 Days</td><td>\$250</td></tr> <tr> <td>31 Days or more</td><td>\$500</td></tr> <tr> <td colspan="2">Not to exceed \$100,000 per LDAR Audit.</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>	1-15 Days	\$100	16-30 Days	\$250	31 Days or more	\$500	Not to exceed \$100,000 per LDAR Audit.	
<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>										
1-15 Days	\$100										
16-30 Days	\$250										
31 Days or more	\$500										
Not to exceed \$100,000 per LDAR Audit.											

Consent Decree Violation	Stipulated Penalty	
xxx. <u>Violation of Subparagraph 55.a. (Corrective Action Plan Implementation).</u> Each failure to implement a corrective action within 90 Days after the LDAR Audit Completion Date or pursuant to the schedule that Defendant must propose pursuant to Subparagraph 55.a. if the corrective action cannot be completed in 90 Days.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1-15 Days	\$500
	16-30 Days	\$750
	31 Days or more	\$1,000
	Not to exceed \$200,000 per LDAR Audit.	
xxxii. <u>Violation of Paragraph 56.</u> Each failure to timely submit a Certification of Compliance that substantially conforms to the requirements of Paragraph 56.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1-15 Days	\$100
	16-30 Days	\$250
	31 Days or more	\$500
	Not to exceed \$75,000	
xxxiii. <u>Violation of Paragraphs 57 and 58—LDAR Program Recordkeeping and Reporting.</u> Each failure to substantially comply with any recordkeeping, submission, or reporting requirement in Subsection V.B. not specifically identified above in this Table.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1-15 Days	\$100
	16-30 Days	\$250
	31 Days or more	\$500

c. Violations of Other Requirements under Section V (Injunctive Relief)

Consent Decree Violation	Stipulated Penalty	
i. <u>Violation of Paragraph 59 (New PORVs).</u> Each failure to install and operate Bottom Dome Vent Piping on any new PORV that is or will be subject to the requirements of Subparts KKK or OOOO.	<u>Period of noncompliance</u>	<u>Penalty per Day late</u>
	1 - 15 Days	\$300
	16 - 30 Days	\$400
	31 Days or more	\$500
	Not to exceed \$50,000 per failure	
ii. <u>Violation of Paragraph 60 (PORV Method 21 Monitoring).</u> Each failure to conduct Method 21 monitoring on a PORV subject to Subparts KKK or OOOO within the required monitoring frequency in accordance with Paragraph 60.	\$2,000 per PORV per monitoring period.	

Consent Decree Violation	Stipulated Penalty	
iii. <u>Violation of Paragraph 61 (PORV Repair Requirements)</u> . Each failure to comply with the requirements of Paragraph 61.	\$300 per Day for each late Day of compliance, not to exceed \$45,000 per leak.	
iv. <u>Violation of Paragraph 62</u> . Each failure to install and operate Bottom Dome Vapor Recovery Piping Installation on an existing PORV subject to Subparts KKK or OOOO that has a Pre-existing Tap and has an Isolation Valve, in accordance with the requirements of Paragraph 62.	\$500 per Day per failure, not to exceed \$45,000 per failure.	
v. <u>Violation of Paragraphs 65 and 66 (PORV Recordkeeping and Reporting)</u> . Each failure to comply with any recordkeeping, submission, or reporting requirement in Paragraphs 65 or 66.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1-15 Days	\$100
	16-30 Days	\$250
	31 Days or more	\$500
vi. <u>Violation of Paragraph 67 (Subpart NNN)</u> . Each failure to comply with the applicable Subpart NNN control requirement or test methods and procedures by complying with the provisions in 40 C.F.R. Part 65, Subpart D in accordance with Paragraph 67.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$1,000
	16 th through 30 th Day	\$2,000
	31 Days for or more	\$3,000
vii. <u>Violation of Paragraph 68</u> . Each failure to comply with the applicable recordkeeping and reporting requirements in accordance with Paragraph 68.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$500
	16 th through 30 th Day	\$1,000
	31 Days for or more	\$2,000
viii. <u>Violation of Paragraph 71</u> . Each failure to conduct leak monitoring of a Fin Fan Unit within the required monitoring frequency in accordance with Paragraph 71.	\$2,000 per Fin Fan Unit per monitoring period.	
ix. <u>Violation of Paragraph 72</u> . Each failure to conduct repair actions of Fin Fan Unit leak in accordance with Paragraph 72.	\$300 per Day for each late Day of compliance, not to exceed \$45,000 per Fin Fan Unit.	
x. <u>Violation of Paragraph 73</u> . Each failure to comply with any recordkeeping requirement under Paragraph 73.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1-15 Days	\$100
	16-30 Days	\$250
	31 Days or more	\$500

Consent Decree Violation	Stipulated Penalty	
xi. <u>Violation of Paragraph 74.</u> Each failure to comply with the emission standard for an Enclosed Combustion Device under Paragraph 74.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$1,000
	16 th through 30 th Day	\$2,000
	31 Days for or more	\$3,000
xii. <u>Violation of Paragraph 76.</u> Each failure to comply with the monitoring requirements for an Enclosed Combustion Device under Paragraph 76.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$500
	16 th through 30 th Day	\$1,000
	31 Days for or more	\$2,000
xiii. <u>Violation of Paragraph 75.</u> Each failure to comply with the minimum operating temperature requirement for an Enclosed Combustion Device under Paragraph 75.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$1,000
	16 th through 30 th Day	\$2,000
	31 Days for or more	\$3,000
xiv. <u>Violation of Paragraph 77.</u> Each failure to comply with the recordkeeping requirements for an Enclosed Combustion Device under Paragraph 77.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$500
	16 th through 30 th Day	\$1,000
	31 Days for or more	\$2,000
xv. <u>Violation of Paragraph 79.</u> Each failure to conduct railcar or truck loading operation leak monitoring (OGI or Method 21) within specified monitoring frequencies in accordance with Paragraph 79.	\$1,000 per railcar or truck loading bay per monitoring period.	
xvi. <u>Violation of Paragraph 80.</u> Failure to comply with the repair action requirements under Paragraph 80.	\$500 per Day for each late Day of compliance, not to exceed \$45,000 per railcar or truck loading bay.	
xvii. <u>Violation of Paragraph 81.</u> Failure to comply with recordkeeping requirements under Paragraph 81.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$500
	16 th through 30 th Day	\$1,000
	31 Days for or more	\$2,000
xviii. <u>Violation of Paragraph 82.</u> Failure to comply with the Isolation Valve installation requirement at Hopedale Facility, the Houston Facility, and the Siloam Facility in accordance with Paragraph 82.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation per vessel</u>
	1 st through 15 th Day	\$1,000
	16 th through 30 th Day	\$2,000
	31 Days for or more	\$3,000

Consent Decree Violation	Stipulated Penalty								
xix. <u>Violation of Paragraph 83</u> . Failure to comply with Method 21 monitoring requirements within specified monitoring frequencies in accordance with Paragraph 83.	\$7,500 per Natural Gasoline Storage Tank per monitoring period.								
xx. <u>Violation of Paragraph 85</u> . Failure to comply with the Isolation Valve installation requirement in accordance with Paragraph 85.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day per violation</u></th></tr> <tr> <td>1st through 15th Day</td><td>\$500</td></tr> <tr> <td>16th through 30th Day</td><td>\$1,000</td></tr> <tr> <td>31 Days for or more</td><td>\$2,000</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>	1 st through 15 th Day	\$500	16 th through 30 th Day	\$1,000	31 Days for or more	\$2,000
<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>								
1 st through 15 th Day	\$500								
16 th through 30 th Day	\$1,000								
31 Days for or more	\$2,000								
xxi. <u>Violation of Paragraph 84</u> . Each failure to conduct repair actions for pressure relief devices on natural gas storage vessels in accordance with Paragraph 84.	\$300 per Day for each late Day of compliance, not to exceed \$45,000 per leak.								
xxii. <u>Violation of Paragraph 86</u> . Failure to comply with recordkeeping requirements under Paragraph 86.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day per violation</u></th></tr> <tr> <td>1st through 15th Day</td><td>\$500</td></tr> <tr> <td>16th through 30th Day</td><td>\$1,000</td></tr> <tr> <td>31 Days for or more</td><td>\$2,000</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>	1 st through 15 th Day	\$500	16 th through 30 th Day	\$1,000	31 Days for or more	\$2,000
<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>								
1 st through 15 th Day	\$500								
16 th through 30 th Day	\$1,000								
31 Days for or more	\$2,000								
xxiii. <u>Violation of Paragraph 88</u> . Failure to submit an initial notification under Subpart Db for each Large Hot Oil Heater in accordance with Paragraph 88.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day per violation per heater</u></th></tr> <tr> <td>1st through 15th Day</td><td>\$1,000</td></tr> <tr> <td>16th through 30th Day</td><td>\$2,000</td></tr> <tr> <td>31 Days for or more</td><td>\$3,000</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day per violation per heater</u>	1 st through 15 th Day	\$1,000	16 th through 30 th Day	\$2,000	31 Days for or more	\$3,000
<u>Period of noncompliance</u>	<u>Penalty per Day per violation per heater</u>								
1 st through 15 th Day	\$1,000								
16 th through 30 th Day	\$2,000								
31 Days for or more	\$3,000								
xxiv. <u>Violation of Paragraph 91</u> . Failure to conduct predictive emissions monitoring or failure to conduct the RATA in accordance with Paragraph 91.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day Per violation per heater</u></th></tr> <tr> <td>1st through 15th Day</td><td>\$500</td></tr> <tr> <td>16th through 30th Day</td><td>\$1,000</td></tr> <tr> <td>31 Days for or more</td><td>\$2,000</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day Per violation per heater</u>	1 st through 15 th Day	\$500	16 th through 30 th Day	\$1,000	31 Days for or more	\$2,000
<u>Period of noncompliance</u>	<u>Penalty per Day Per violation per heater</u>								
1 st through 15 th Day	\$500								
16 th through 30 th Day	\$1,000								
31 Days for or more	\$2,000								
xxv. <u>Violation of Paragraph 90</u> . Each failure to comply with the emissions limitation in accordance with Paragraph 90.	<table> <tr> <th><u>Period of noncompliance</u></th><th><u>Penalty per Day per violation per heater</u></th></tr> <tr> <td>1st through 15th Day</td><td>\$1,000</td></tr> <tr> <td>16th through 30th Day</td><td>\$2,000</td></tr> <tr> <td>31 Days for or more</td><td>\$3,000</td></tr> </table>	<u>Period of noncompliance</u>	<u>Penalty per Day per violation per heater</u>	1 st through 15 th Day	\$1,000	16 th through 30 th Day	\$2,000	31 Days for or more	\$3,000
<u>Period of noncompliance</u>	<u>Penalty per Day per violation per heater</u>								
1 st through 15 th Day	\$1,000								
16 th through 30 th Day	\$2,000								
31 Days for or more	\$3,000								

Consent Decree Violation	Stipulated Penalty	
xxvi. <u>Violation of Paragraph 93.</u> Failure to comply with recordkeeping requirements under Paragraph 93.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$500
	16 th through 30 th Day	\$1,000
	31 Days for or more	\$2,000
xxvii. <u>Violation of Paragraph 94.</u> Failure to submit an initial notification under Subpart Dc for each Small Hot Oil Heater in accordance with Paragraph 94.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation per heater</u>
	1 st through 15 th Day	\$1,000
	16 th through 30 th Day	\$2,000
	31 Days for or more	\$3,000
xxiii. <u>Violation of Paragraph 95.</u> Failure to measure and record fuel usage in accordance with Paragraph 95.	<u>Period of noncompliance</u>	<u>Penalty per Day per violation</u>
	1 st through 15 th Day	\$500
	16 th through 30 th Day	\$1,000
	31 Days for or more	\$2,000

d. Violations of Compressor Stations Mitigation Projects, Permits, SEPs, or Reporting Requirements.

Consent Decree Violation	Stipulated Penalty	
i. For failure to undertake or satisfactorily complete any Compressor Station Mitigation Project in compliance with Section V of this Consent Decree.	<u>Period of noncompliance</u>	<u>Penalty per Violation per Day</u>
	1 - 15 Days	\$750
	16 - 30 Days	\$1,000
	31 Days or more	\$1,500
ii. For failure to timely apply for any permit in accordance with the requirements of Section VI (Incorporation of Consent Decree Requirements into Federally Enforceable Permits).	\$1,000 per Day of violation.	

Consent Decree Violation	Stipulated Penalty	
iii. For the failure to comply with the requirements of Section VII (Supplemental Environmental Projects) or Appendix B.	<u>Period of noncompliance</u>	<u>Penalty per Day</u>
	<u>Per required monitoring</u>	<u>Per required</u>
	<u>System</u>	<u>monitoring</u>
		<u>System</u>
iv. The following stipulated penalties shall accrue per violation per Day for each violation of the reporting requirements of this Consent Decree.	Days 1-30	\$750
	Days 31 – 60	\$1,250
	Days 61 and later	\$2,000
	<u>Period of noncompliance</u>	<u>Penalty per Day</u>
		<u>per violation</u>
	1-15 Days	\$300
	16-30 Days	\$750
	31 Days or more	\$1,500

141. Stipulated Penalties in Lieu of those in Subparagraphs 140.b.xvi., xvii and xviii.

a. For purposes of this Paragraph, the term “Non-Compliant Valve” means a valve that is either: (i) not a Low-E Valve; or (ii) not fitted with Low-E Packing. The term “Compliant Valve” means a valve that is either: (i) a Low-E Valve; or (ii) fitted with Low-E Packing.

b. The stipulated penalties in Subparagraph 141.c. are to be used instead of those in Subparagraphs 140.b.xvi., xvii., and xviii. when a Non-Compliant Valve is installed instead of a Compliant Valve and all of the following requirements are met:

- i. Defendants, and not a government agency, discover the failure involved;
- ii. Defendants promptly report the failure to EPA;
- iii. In the report, Defendants set forth a schedule for promptly replacing the Non-Compliant Valve with a Compliant Valve; provided, however, that Defendants shall not be required to

undertake an unscheduled shutdown of the affected Covered Process Unit in proposing the schedule unless Defendant so chooses;

- iv. Defendants monitor the Non-Compliant Valve once a month from the time of its discovery until the valve is replaced with a Compliant Valve and no Screening Values above 500 ppm are recorded;
- v. Defendants replace the Non-Compliant Valve or Valve Packing with a Compliant Valve or Valve Packing in accordance with the schedule set forth in Subparagraph 141.b.iii. and
- vi. Defendants demonstrate that in good faith it intended to install a Compliant Valve but inadvertently installed a Non-Compliant Valve.

c. The following stipulated penalties shall apply under the circumstances in Subparagraph 141.b.:

- i. In lieu of the penalty in Subparagraph 140.b.xvi., \$2,000 per failure.
- ii. In lieu of the penalty in Subparagraph 140.b.xvii., \$50 per Day per failure, not to exceed \$2,000.
- iii. In lieu of the penalty in Subparagraph 140.b.xviii., \$2,000 per failure.

142. Waiver of Payment. Either the United States or State Co-Plaintiff may, in the

unreviewable exercise of their respective discretion, reduce or waive payment of stipulated penalties otherwise due them under this Consent Decree.

143. Stipulated Penalties Payment Due Date. Stipulated Penalties shall be paid no later than 30 Days after receipt of a written demand by the United States or State Co-Plaintiff unless the demand is disputed through compliance with the requirements of the Dispute Resolution (Section XIII) below.

144. Accrual of Stipulated Penalties.

a. Stipulated penalties will begin to accrue on the Day after performance is due or the Day a violation occurs, whichever is applicable, and will continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree. The penalties that accrue for each violation or failure to perform an obligation do not increase from one period of noncompliance to the next unless the violations or failures to perform are continuous. Defendants shall pay interest at the rate specified in 28 U.S.C. § 1961. Interest on stipulated penalties shall begin to accrue on the 31st Day after a Defendant's receipt of a demand for stipulated penalties by a Plaintiff.

b. Accrual of Stipulated Penalties During Dispute Resolution. Stipulated penalties shall continue to accrue during any Dispute Resolution, but need not be paid until the following:

i. If the dispute is resolved by agreement or a decision by EPA that is not appealed to the Court, Defendant(s) shall pay accrued penalties determined to be owing, together with interest, to the United States

and the Applicable State Co-Plaintiff within 30 Days of the effective date of the agreement or the expiration of Paragraph 155's period for seeking judicial resolution of a dispute.

- ii. If the dispute is appealed to the Court and the United States and the Applicable State Co-Plaintiff prevail, Defendant(s) shall pay all penalties determined by the Court to be owed, together with Interest, within sixty (60) Days of receiving the Court's final decision or order, except if the District Court's decision is appealed, and then as provided in Subparagraph iii, below.
- iii. If any Party appeals the District Court's decision, Defendant(s) shall pay all penalties determined to be owing by the final decision of the appellate court, together with Interest, within thirty (30) Days of receiving the final appellate court decision.

145. Subject to the provisions of Section XV (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States and the State Co-Plaintiffs for Defendants' violations of this Consent Decree or applicable law. Where a violation of this Decree is also a violation of relevant statutory or regulatory requirements, Defendants shall be allowed a credit for any stipulated penalties paid against any statutory penalties imposed for such violation under the applicable federal or state requirement.

XII. FORCE MAJEURE

146. "Force majeure," for purposes of this Consent Decree, is defined as any event

arising from a cause or causes beyond the control of Defendants, of any entity controlled by Defendants, or of Defendants' contractors, that delays or prevents the performance of any obligation under this Decree despite Defendants' best efforts to fulfill the obligation. The requirement that Defendants exercise "best efforts to fulfill the obligation" includes using reasonable efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred in order to minimize delay and any adverse effects of the delay to the greatest extent possible. Force majeure does not include Defendants' financial inability to perform any obligation under this Decree.

147. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, for which Defendants intend or may intend to assert a claim of force majeure, Defendants shall provide notice orally or by electronic transmission within three (3) Days of when Defendants first knew that the event might cause a delay to the addresses provided in Section IX of this Consent Decree (Notices). Within fifteen (15) Days of this initial notification, Defendants shall provide in writing to EPA and to the Applicable State Co-Plaintiff, to the extent available: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to mitigate the delay or the effect of the delay; and Defendants' rationale for attributing such delay to a force majeure event if it intends to assert such a claim. Defendants shall include with any notice all available documentation necessary to support the claim that the delay was attributable to a force majeure. Any material failure to comply with the above requirements that prejudices EPA's ability to assess Defendants' claim of force majeure shall preclude Defendants from asserting any claim of

force majeure for that event for the period of time of such failure to comply.

148. If EPA agrees that the delay or anticipated delay is attributable to a force majeure, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Defendants in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure.

149. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Defendants in writing of its decision.

150. If Defendants elect to invoke the dispute resolution procedures set forth in Section XIII (Dispute Resolution) of this Consent Decree with regard to a force majeure event, it shall do so no later than thirty (30) Days after receipt of EPA's notice. In any such proceeding, Defendants bear the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendants complied with the requirements of Paragraphs 146 and 147. If Defendants carry this burden, the delay at issue shall be deemed not to be a violation of the affected obligation of this Decree.

XIII. DISPUTE RESOLUTION

151. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve any dispute

arising under or with respect to this Consent Decree.

152. Informal Dispute Resolution. Any dispute subject to dispute resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendants dispute a decision of the United States and sends the United States and the Applicable State Co-Plaintiff(s) a written Notice of Dispute. Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed ninety (90) Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by the United States, after consultation with the Applicable State Co-Plaintiff(s) shall be considered binding unless, within ninety (90) Days after the conclusion of the informal negotiation period, Defendants invoke formal dispute resolution procedures as set forth below.

153. Formal Dispute Resolution. Defendants shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the Applicable State Co-Plaintiff(s) a written Statement of Position regarding the matter in dispute. The Defendants' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendants' position and any supporting documentation relied upon by Defendants.

154. The United States, after consultation with the Applicable State Co-Plaintiff(s) shall serve its Statement of Position within forty-five (45) Days of receipt of Defendants' Statement of Position. The United States' Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting

documentation relied upon by the United States. The United States' Statement of Position shall be binding on Defendants unless Defendants file a motion for judicial review of the dispute in accordance with the following Paragraph.

155. Defendants may seek judicial review of the dispute by filing with the Court and serving on the United States, in accordance with Section IX of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 30 Days of receipt of the United States' Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Defendants' position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

156. The United States shall respond to Defendants' motion within the time period allowed by the Local Rules of this Court for responses to dispositive motions. Defendants may file a reply memorandum to the extent permitted by the Local Rules.

157. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraphs 155 and 156 above pertaining to a matter that involves EPA's exercise of discretion under this Consent Decree, Defendants shall have the burden of proof based on the administrative record (including the Parties' Statements of Position) and the applicable standard of review as set forth in the Administrative Procedure Act, 5 U.S.C. § 500 et seq.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in

any other dispute brought under Paragraphs 155 and 156 above, Defendants shall bear the burden of demonstrating that their position complies with this Consent Decree.

158. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Defendants under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Subparagraph 144.b. above. If Defendants do not prevail on the disputed issue, subject to the Court's order, stipulated penalties shall be assessed and paid as provided in Section XI (Stipulated Penalties).

XIV. INFORMATION COLLECTION AND RETENTION

159. The United States, any Applicable State Co-Plaintiff, and their representatives and employees shall have the right of entry into any Covered Facility, at all reasonable times, upon presentation of credentials and any other documentation required by law, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
- c. obtain documentary evidence, including photographs and similar data, relevant to compliance with the terms of this Consent Decree; and
- d. assess Defendants' compliance with this Consent Decree.

160. Until two years after termination of this Consent Decree, (or for such longer period as may be required under State law), Defendants shall retain, and shall instruct its contractors and agents to preserve, all documents, records, or other information, regardless of

storage medium (e.g., paper or electronic) in their or their contractors' or agents' possession or control, or that come into their or their contractors' or agents' possession or control, and that directly relate to Defendants' performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, the United States and/or any Applicable State Co-Plaintiff may request copies of any documents, records, or other information required to be maintained under this Paragraph.

161. Except for emissions data, including Screening Values, a Defendant may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that the Defendant seeks to protect as CBI, the Defendant shall follow the procedures set forth in 40 C.F.R. Part 2, where applicable. Except for emissions data, including Screening Values, the Defendant reserves the right to assert any legal privilege and the United States reserves the right to challenge any claim of privilege.

162. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or any Applicable State Co-Plaintiff pursuant to applicable federal laws, state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendants to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

163. Entry of this Consent Decree resolves the civil claims of the United States and the State Co-Plaintiffs, from the date those claims accrued through the Date of Lodging, for the

violations alleged in the Complaint filed in this action, Region 5's September 20, 2015 Notice and Finding of Violation for the Hopedale Facility (Appendix E), Region 3's April 4, 2016 Notice of Noncompliance for the Houston Facility (Appendix F), Region 5's June 21, 2016 Finding of Violation for the Hopedale Facility (Appendix G), Region 5's September 7, 2016 Finding of Violation for the Seneca Facility (Appendix H), and other alleged violations of the referenced NSPS Subparts at the following Covered Facilities:

- a. Houston Facility, Subparts A, VV, VVa, KKK, NNN, and OOOO;
- b. Bluestone Facility, Subparts A, Kb, VVa, NNN, and OOOO;
- c. Majorsville Facility, Subparts A, VV, VVa, KKK, and OOOO;
- d. Mobley Facility, Subparts A, VVa, and OOOO;
- e. Sherwood Facility, Subparts A, VVa, and OOOO;
- f. Cobb Facility, Subparts A, VV, VVa, KKK, and OOOO;
- g. Kenova Facility, Subparts A, VV, VVa, KKK, and OOOO;
- h. Siloam Facility, Subparts A, Kb, VV, VVa, KKK, NNN, and OOOO;
- i. Langley Facility, Subparts A, VV, VVa, KKK, and OOOO;
- j. Boldman Facility, Subparts A, VV, VVa, KKK, and OOOO;
- k. Hopedale Facility, Subparts A, Kb, VVa, NNN, and OOOO;
- l. Cadiz Facility, Subparts A, VVa, and OOOO;
- m. Seneca Facility, Subparts A, VVa, and OOOO;
- n. Utica Condensate Facility, Subparts A, VVa, NNN, and OOOO;
- o. Arapaho Facility, Subparts A, VV, VVa, KKK, and OOOO;
- p. Buffalo Creek Facility, Subparts A, VVa, and OOOO;

- q. Javelina Facility, Subparts A, Kb, VV, VVa, KKK, NNN, and OOOO;
- r. Carthage Facility, Subparts A, VV, VVa, KKK, and OOOO;
- s. Carthage East Facility, Subparts A, VV, VVa, KKK, and OOOO; and
- t. Hidalgo Facility, Subparts A, VVa, and OOOO.

Entry of this Consent Decree also resolves the civil claims of the United States and the State Co-Plaintiffs, from the date those claims accrued through the Date of Lodging, for the violations alleged in the Complaint of 40 C.F.R. Part 60, Subpart Db, for the following Large Hot Oil Heaters: Cadiz H-1782; Hopedale H-1741, and Hot Oil #4; Houston 3 Hot Oil and Frac Hot Oil-H-781; De-Ethanizer Hot Oil H-1741; Majorsville De-Ethanizer Hot Oil (H-2782 and 2782); Sherwood De-Ethanizer Hot Oil; and 40 C.F.R. Part 60, Subpart Dc, for the following Small Hot Oil Heaters: Heaters Cadiz B002, B008, and B013; Utica Condensate B001 and B002; Hopedale B001 and B002; Seneca B004, B005, B006, B009, and B011; Bluestone Source 107-4, Source 107-5, Source 107-8, Source 107-12, and Source 107-13; Carthage H8, H-2 and H-6; Mobley H-1781, H-2781, H-4781, and H-5781; Majorsville H-781, H-3781, H-4781, H-4782, and H6782; and Sherwood H771 and H-10768.

164. The resolution of liability by the United States and the State Co-Plaintiffs to Defendants as set forth in Paragraph 163, will be rendered void if Defendants materially fail to comply with the obligations and requirements of Sections V through VII of this Consent Decree; provided, however, that the resolution of liability in Paragraph 163 will not be rendered void if Defendants timely remedy such material failure and pay any stipulated penalties due as a result of such material failure.

165. The United States and the State Co-Plaintiffs reserve all legal and equitable

remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraphs 145, 163 and 164. This Consent Decree shall not be construed to limit the rights of the United States or the State Co-Plaintiffs to obtain penalties or injunctive relief under the CAA or implementing regulations, or under other federal laws, state laws, regulations, or permit conditions, except as expressly specified in Paragraphs 163 and 164. The United States and the State Co-Plaintiffs further reserve all legal and equitable remedies to address any situation that may present an imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, the Covered Facility, whether related to the violations addressed in this Consent Decree or otherwise.

166. In any subsequent administrative or judicial proceeding initiated by the United States and/or the State Co-Plaintiffs for injunctive relief, civil penalties, or other appropriate relief relating to a Covered Facility, Defendants shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States and/or State Co-Plaintiffs in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraphs 163 and 164 of this Section.

167. This Consent Decree is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Defendants are responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations, and permits and a Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits. The United States and the State

Co-Plaintiffs do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Defendants' compliance with any aspect of this Consent Decree will result in compliance with provisions of the CAA, or with any other provisions of federal, state, or local laws, regulations, or permits.

168. This Consent Decree does not limit or affect the rights of Defendants or of the United States and State Co-Plaintiffs against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties not party to this Consent Decree, against Defendants, except as otherwise provided by law.

169. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party that is not a Party to this Consent Decree.

170. Defendants expressly deny and do not admit any liability to the United States or the State Co-Plaintiffs arising out of the conduct, transactions or occurrences alleged in the Complaint. Nothing in this Consent Decree shall be construed as an admission of Defendants' liability, nor shall Defendants' performance of any obligation under this Decree be considered any admission of liability. This Consent Decree shall not be admissible against Defendants in any administrative or judicial proceeding, except in a proceeding initiated by the Parties to enforce this Decree.

XVI. COSTS

171. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and any Applicable State Co-Plaintiffs shall be entitled to collect the costs (including attorneys' fees) against a Defendant incurred in any action necessary to enforce this Consent Decree or to collect any portion of the civil penalty or any stipulated

penalties due but not paid by a Defendant.

XVII. EFFECTIVE DATE

172. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket. In the event the United States withdraws or withholds consent to this Consent Decree before entry, or the Court declines to enter the Consent Decree, then the preceding requirement to comply with requirements of this Consent Decree upon the Date of Lodging shall terminate.

XVIII. RETENTION OF JURISDICTION

173. The Court shall retain jurisdiction over this case until termination of this Consent Decree for the purposes of resolving disputes arising under this Decree, entering orders modifying this Decree, or effectuating or enforcing compliance with the terms of this Decree.

XIX. MODIFICATION

174. This Consent Decree contains the entire agreement of the Parties and shall not be modified by a prior oral or written agreement, representation, or understanding. Non-material modifications to this Consent Decree shall be effective when signed in writing by the United States, the Defendants responsible for compliance at the Covered Facility or Covered Facilities affected by the modification pursuant to Paragraph 11 above and the Applicable State Co-Plaintiff. The United States shall file non-material modifications with the Court on a periodic basis. Material modifications to this Consent Decree shall be in writing, signed by the United States, the Applicable State Co-Plaintiff, and the Defendants responsible for the compliance at the Covered Facility or Covered Facilities affected by the modification pursuant to Paragraph 11

above, and shall be effective upon approval by the Court.

175. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XIII of this Decree (Dispute Resolution); provided, however, that instead of the burden of proof as provided by Paragraph 157, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XX. TERMINATION

176. Termination: Conditions Precedent. Prior to termination, Defendants must have completed all of the following requirements of this Consent Decree:

- a. Payment of all civil penalties, stipulated penalties and other monetary obligations;
- b. Satisfactory compliance with all provisions of Section V (Injunctive Relief).
- c. Operation of each Covered Facility for at least two years in satisfactory compliance with the emission limitations, standards, and work practices established under this Consent Decree and certification of such compliance for each Covered Facility within the Annual Compliance Report following the conclusion of the two-year compliance period;
- d. Completion of the Supplemental Environmental Projects in Section VII;
- e. Completion of the Compressor Stations Mitigation Projects in Section V;
- f. Application for and receipt of all non-Title V permits incorporating the requirements established for Covered Facilities under this Consent Decree as required by

Section VI;

g. Application for modification, revision or amendment to all Title V operating permits and receipt of Title V operating permits incorporating the requirements established for Covered facilities under the Consent Decree as required by Section VI; and

h. Paid all applicable Title V fees due for Covered Facilities at the time of the Request for Termination.

177. Termination: Procedure.

a. At such time as Defendants believe that they have satisfied the conditions for termination set forth in Paragraph 176, Defendants may submit a request for termination to the United States and State Co-Plaintiffs by certifying such compliance in accordance with the certification language in Paragraph 120. In the Request for Termination, Defendants must demonstrate that they have satisfied the conditions for termination set forth in Paragraph 176. The Request for Termination shall include all necessary supporting documentation.

b. Defendants may submit a request for partial termination of this Consent Decree to the United States and State Co-Plaintiff(s) after demonstrating completion of the requirements in Subparagraph 176.a., above. The United States will consult with State Co-Plaintiff(s), and will respond to Defendants request in its unreviewable discretion.

c. Following receipt by the United States and State Co-Plaintiffs, the Parties shall confer informally concerning the Request. If the United States and State Co-

Plaintiffs agree that the Decree may be terminated, the Parties shall submit a joint motion to terminate this Consent Decree.

d. If the United States or a State Co-Plaintiff does not agree that the Consent Decree may be terminated, or if Defendants do not receive a written response from the United States and the State Co-Plaintiffs within 60 Days for Defendants' Request for Termination, Defendants may invoke dispute resolution under Section XIII of this Decree (Dispute Resolution).

XXI. PUBLIC PARTICIPATION

178. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States and the State Co-Plaintiffs reserve the right to withdraw or withhold their consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendants consent to entry of this Consent Decree without further notice.

XXII. SIGNATORIES/SERVICE

179. The undersigned representatives of the Defendants and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice (or his or her designee) and the State Co-Plaintiffs each certify that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

180. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis.

181. Defendants agree not to oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree unless the United States has notified Defendants in writing that it no longer supports entry of the Decree.

182. Defendants agree to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons. Defendants need not file an answer to the complaint in this action unless or until the Court expressly declines to enter this Consent Decree.

XXIII. INTEGRATION

183. This Consent Decree and its Appendices constitute the final, complete, and exclusive agreement and understanding between the Parties with respect to the settlement embodied in this Consent Decree and its Appendices, and supersede all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. No other document, except for any plans or other deliverables that are submitted and approved pursuant to this Decree, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, and no such extrinsic document or statement of any kind shall be used in construing the terms of this Decree.

XXIV. SECTION 162(f)(2)(A)(ii) IDENTIFICATION

184. For purposes of the identification requirement of Section 162(f)(2)(A)(ii) of the Internal Revenue Code, 26 U.S.C. § 162(f)(2)(A)(ii), performance of Section II (Applicability and Sales or Transfers of Ownership and Operation Interests), Paragraph 9, Section V (Injunctive

Relief), Paragraphs 19 – 100, Section VI (Permits), Paragraphs 101 – 103, Section VIII (Reporting), Paragraphs 115(a)(i)(1) - (11), (iii), and (b), 116 - 117 and 120, and Section XIV (Information Collection and Retention), Paragraphs 159 - 160, is restitution or required to come into compliance with law.

XXV. FINAL JUDGMENT

185. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court in this action as to the United States, State Co-Plaintiffs, and Defendants. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

United States, et al. v. MPLX LP, et al.:

DATED this 8th Day of January 2018.


/s/ James G. Carr

UNITED STATES DISTRICT JUDGE
NORTHERN DISTRICT OF OHIO

We hereby consent to the entry of the Consent Decree in the matter of United States, et al. v. MPLX LP, et al., subject to public notice and comment.

FOR THE UNITED STATES OF AMERICA


JEFFREY H. WOOD
Assistant Attorney General
Environment & Natural Resources Division
United States Department of Justice

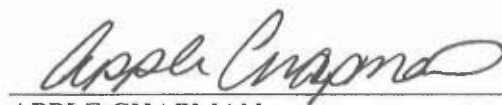


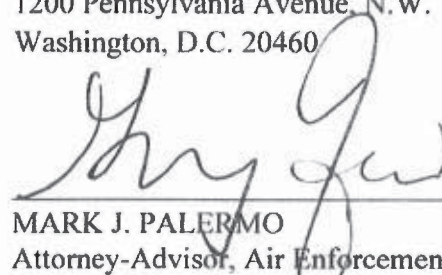
JAMES D. FREEMAN
Senior Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
999 18th Street
South Terrace, Suite 370
Denver, CO 80202

We hereby consent to the entry of the Consent Decree in the matter of United States, et al v. MPLX LP, et al., subject to public notice and comment.

FOR THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, OFFICE OF ENFORCEMENT
AND COMPLIANCE ASSURANCE

 8/17/18
ROSEMARIE A. KELLEY
Director, Office of Civil Enforcement
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

 8/16/18
APPLE CHAPMAN
Deputy Director, Air Enforcement Division
Office of Civil Enforcement
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

 8/16/18
for MARK J. PALERMO
Attorney-Advisor, Air Enforcement Division
Office of Civil Enforcement
United States Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

We hereby consent to the entry of the Consent Decree in the matter of United States, et al. v. MPLX L.P., et al., subject to public notice and comment.

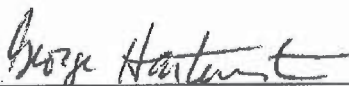
FOR PLAINTIFF STATE OF OKLAHOMA ON
BEHALF OF THE OKLAHOMA DEPARTMENT
OF ENVIRONMENTAL QUALITY:

A handwritten signature in black ink, appearing to read 'S. Thompson', written over a horizontal line.

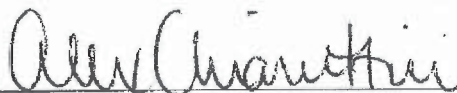
SCOTT A. THOMPSON
Executive Director
Oklahoma Department of Environmental Quality
Air Quality Division
707 N. Robinson, P.O. Box 1677
Oklahoma City, OK 73101

We hereby consent to the entry of the Consent Decree in the matter of United States, et al. v. MPLX L.P., et al., subject to public notice and comment.

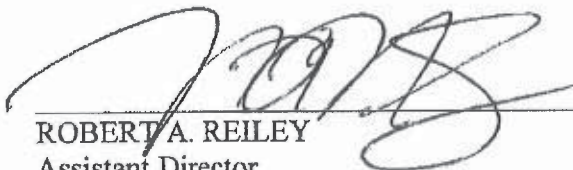
FOR PLAINTIFF COMMONWEALTH OF
PENNSYLVANIA, DEPARTMENT OF
ENVIRONMENTAL PROTECTION:



GEORGE HARTENSTEIN
Deputy Secretary for Waste Air
Radiation and Remediation
Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
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ALEXANDRA C. CHIARUTTINI
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ROBERT A. REILEY
Assistant Director
Bureau of Regulatory Counsel
Department of Environmental Protection
Office of Chief Counsel
Rachel Carson Building
400 Market Street
Harrisburg, PA 17101

We hereby consent to the entry of the Consent Decree in the matter of United States, et al. v. MPLX L.P., et al., subject to public notice and comment.

FOR PLAINTIFF STATE OF WEST VIRGINIA:



WILLIAM F. DURHAM
Director, Division of Air Quality
West Virginia Department of
Environmental Protection
601 57th St.
Charleston, WV 25304



JASON WANDLING
General Counsel
West Virginia Department of
Environmental Protection
601 57th St.
Charleston, WV 25304

APPENDIX A

APPENDIX A

Factors to be Considered and Procedures to be Followed To Claim Commercial Unavailability

This Appendix outlines the factors to be taken into consideration and the procedures to be followed for Defendants to assert that a Low-E Valve or Low-E Packing is “commercially unavailable” pursuant to Paragraph 40 of the Consent Decree.

I. FACTORS

A. Nothing in this Consent Decree or this Appendix requires Defendants to utilize any valve or packing that is not suitable for its intended use in a Covered Process Unit.

B. The following factors are relevant in determining whether a Low-E Valve or Low-E Packing is commercially available to replace or repack an existing valve:

1. Valve type (*e.g.*, ball, gate, butterfly, needle) (this LDAR Program does not require consideration of a different type of valve than the type that is being replaced);
2. Nominal valve size (*e.g.*, 2 inches, 4 inches);
3. Compatibility of materials of construction with process chemistry and product quality requirements;
4. Valve operating conditions (*e.g.*, temperature, pressure);
5. Service life;
6. Packing friction (*e.g.*, impact on operability of valve);
7. Whether the valve is part of a packaged system or not;
8. Retrofit requirements (*e.g.*, re-piping or space limitations);
9. Other relevant considerations.

C. The following factors may also be relevant, depending upon the Process Unit or equipment where the valve is located:

1. In cases where the valve is a component of equipment that Defendants are licensing or leasing from a third party, valve or valve packing specifications identified by the lessor or licensor of the equipment of which the valve is a component.
2. Valve or valve packing vendor or manufacturer recommendations for the relevant process unit components.

II. PROCEDURES THAT DEFENDANTS SHALL FOLLOW TO ASSERT COMMERCIAL UNAVAILABILITY

A. Defendants shall comply with the following procedures if they seek to assert commercial unavailability under Paragraph 40 of the Consent Decree:

1. Defendants must contact a reasonable number of vendors of valves or valve packing that Defendants, in good faith, believe may have valves or valve packing suitable for the intended use taking into account the relevant factors listed in Section I of this Appendix above.

- a. For purposes of this Consent Decree, a reasonable number of vendors presumptively shall mean no less than three.
- b. If fewer than three vendors are contacted, the determination of whether such fewer number is reasonable shall be based on the factors in Section I.C.(1) and (2) or on a demonstration that fewer than three vendors offer valves or valve packing considering the factors in Section I.B.(1) – (9).

2. Defendants shall obtain a written representation from each vendor, or equivalent documentation, that a particular valve or valve packing is not available as “Low-Emissions” from that vendor for the intended conditions or use.

a. “Equivalent documentation” may include e-mail or other correspondence or data showing that a valve or valve packing suitable for the intended use does not meet the definition of “Low-E Valve” or “Low-E Packing” in the Consent Decree or that the valve or packing is not suitable for the intended use.

b. If the vendor does not respond or refuses to provide documentation, “equivalent documentation” may consist of records of Defendants’ attempts to obtain a response from the vendor.

3. Each LDAR Program Compliance Status Report required by Section V of the Consent Decree shall identify each valve that Defendants otherwise were required to replace or repack, but for which, during the time period covered by the Report, Defendants determined that a Low-E Valve and/or Low-E Packing was not commercially available. Defendants shall provide a complete explanation of the basis for its claim of commercial unavailability, including, as an attachment to the Compliance Status Report, all relevant documentation. This report shall be valid for a period of 365 Days from the date of the report for the specific valve involved and all other similar valves, taking into account the factors listed in Part I.

III. OPTIONAL EPA REVIEW OF DEFENDANT'S ASSERTION OF COMMERCIAL UNAVAILABILITY

A. At its option, EPA may review an assertion by Defendants of commercial unavailability. If EPA disagrees with Defendants' assertion, EPA shall notify Defendants in writing, specifying the Low-E Valve or Low-E Packing that EPA believes to be commercially available and the basis for its view that such valve or packing is appropriate taking into consideration the Factors described in Part I. After Defendants receive EPA's notice, the following shall apply:

1. Defendants shall not be required to retrofit the valve or valve packing for which it asserted commercial unavailability (unless Defendants are otherwise required to do so pursuant to another provision of the Consent Decree).

2. Defendants shall be on notice that EPA will not accept a future assertion of commercial unavailability for: (i) the valve or packing that was the subject of the unavailability assertion; and/or (ii) a valve or packing that is similar to the valve or packing subject to the unavailability assertion, taking into account the Factors described in Part I.

3. If Defendants disagree with EPA's notification, Defendants and EPA shall informally discuss the basis for the claim of commercial unavailability. EPA may thereafter revise its determination, if necessary.

4. If Defendants make a subsequent commercial unavailability claim for the same or similar valve or packing that EPA previously rejected, and the subsequent claim also is rejected by EPA, Defendants shall retrofit the valve or packing with the commercially available valve or packing unless Defendants are successful under Subsection III.B of this Appendix below.

B. Any disputes under this Appendix first shall be subject to informal discussions between Defendants and EPA for a period not to exceed 30 Days before Defendants shall be required to invoke the Dispute Resolution provisions of Section XIII of the Consent Decree. Thereafter, if the dispute remains, Defendants shall invoke the Dispute Resolution provisions.

APPENDIX B

FENCE LINE MONITORING SYSTEM SUPPLEMENTAL ENVIRONMENTAL PROJECT

A. General Requirements

1. Pursuant to Section VII of the Consent Decree, and in accordance with the specifications and provisions in this Appendix, Defendants will install, operate, and maintain a fence line monitoring system (“FLMS”) at the Houston Facility, Siloam Facility, Sherwood Facility, and Carthage Facility as required by this Consent Decree. Defendants will submit Relevant Data to EPA’s database, Air Quality System (“AQS”), and follow the reporting schedule in 40 C.F.R. § 58.16(b). “Relevant Data” shall mean the hourly block averages of propane, butane, pentane, hexane, benzene, toluene ethylbenzene, xylene and all of its isomers, total VOCs, and reduced sulfur compounds, wind speed, and wind direction that are collected during periods at all times.
2. Within 120 Days of the Effective Date of this Consent Decree, Defendants shall submit to EPA for review and approval a FLMS Plan that shall include, at a minimum:
 - a. An identification of the location of the meteorological station required by this Appendix and how this location meets this Appendix’s requirements.
 - b. A Quality Assurance Project Plan (“QAPP”) that describes the Quality Assurance/Quality Control procedures, specifications, and other technical activities to be implemented to ensure: (i) that the results of this FLMS SEP meet project specifications; and (ii) the accuracy, validity, representativeness, and usability of the data obtained by all monitoring equipment, including the stationary equipment and systems identified in Section B of this Appendix (Stationary Equipment Requirements). The QAPP shall follow the outline and guidance in the EPA publication entitled “Technical Assistance Document for the National Air Toxics Trends Stations Program, Revision 3.” The QAPP shall include a 75% data completeness requirement for each Quarter for each parameter.
 - c. A description of the implementation of Data Availability (Paragraph 13) requirements of this Appendix.
 - d. A schedule – with a start date contingent upon approval of the FLMS Plan – for expeditiously purchasing, installing, upgrading, and commencing operation of specifically-identified systems and equipment that met all requirements of this Appendix.
3. Upon EPA approval of the FLMS Plan, after consultation with the Applicable State Co-Plaintiff, in compliance with the schedule in the approved Plan, Defendants shall purchase or lease all equipment specified in the Plan, shall complete the installation of all such

equipment, and shall upgrade all systems or stations as set forth in the approved Plan.

4. Defendants shall promptly correct deficient implementation of its FLMS Plan. Any disputes related to the FLMS Plan or this Appendix shall be resolved pursuant to the dispute resolution procedures set forth in Section XIII of the Consent Decree.
5. Defendants may seek EPA approval to modify the FLMS Plan at any time during the effective period of this Consent Decree.

B. Stationary Equipment Requirements

6. Overview. The FLMS shall consist of:
 - a. A meteorological station at each facility to monitor meteorological parameters (Paragraph 7);
 - b. Upwind and downwind stations at the Houston Facility, Sherwood Facility, and Siloam Facility to monitor air pollutants (Paragraphs 8-12);
 - c. Downwind station at Carthage Facility to monitor air pollutants (Paragraphs 8-12); and
 - d. A Data Acquisition System for all upwind, downwind, and meteorological stations (Paragraph 13).
7. Instruments for Measuring and Recording Wind Speed, Wind Direction, Ambient Temperature, and Barometric Pressure. Specific meteorological parameters will be continuously monitored to obtain data representative of the meteorological conditions at each facility. The data set produced shall be adequate to correlate hourly block average conditions and thirty-minute rolling average conditions (collected on a five-minute basis) with pollutant measurements and transport.
 - a. Continuously measured meteorological parameters shall include hourly block average and thirty-minute rolling average horizontal wind speed and wind direction, the standard deviation of horizontal wind direction (sigma theta), air temperature, and barometric pressure. Wind speed and direction shall be measured at a height of approximately 10 meters. Temperature and barometric pressure shall be measured at a height of 2 to 3 meters. The sensors shall, to the extent practicable, be positioned away from, or above, obstructions such as buildings and process units that may interfere with wind direction measurements.
 - b. Wind direction and sigma theta measurement data shall be auto-corrected to True North, rounded to the nearest whole degree. Wind speed data shall be reported in meters per second, rounded to the nearest tenth.
 - c. Air temperature data shall be reported in degrees Fahrenheit or Celsius, rounded to the nearest tenth of a degree.
 - d. Barometric pressure data may be in any unit of pressure.

8. Air Pollutant Monitoring Stations: Equipment and Pollutant Measurement Capability. Defendants shall install continuous Auto-Gas Chromatographs at each upwind and downwind monitoring station so that each station has each of the following:
 - a. Instruments capable of measuring and recording the concentrations of the following compounds in the air at a minimum detection level of 1.0 part per billion by volume (“ppbV”): propane, butane, pentane, hexane, benzene, toluene, ethylbenzene, xylene and all of its isomers, and total VOCs. The data will be recorded as hourly block averages.
 - b. The continuous measurement of the compounds listed in Subparagraph 8.a. above, shall be accomplished using an Auto-Gas Chromatograph (“GC”). The automated GCs shall be operated and maintained in accordance with the manufacturer’s recommendations and shall have a measurement range of 1.0 to 500 ppbV for all gases.
9. Air Pollutant Monitoring Stations: Temperature-Controlled Shelter: Each air pollutant monitoring station shall be operated inside a temperature-controlled equipment shelter.
 - a. The temperature within each shelter shall be continuously monitored and recorded using a calibrated resistance temperature detector (“RTD”) and microprocessor or PC-based data acquisition system.
 - b. The climate control system for each monitoring shelter will be capable of maintaining a stable temperature within the range of 20°C to 30°C.
 - c. The monitoring shelters shall measure approximately 8 feet wide by 8 feet long by 8 feet high.
 - d. Each shelter shall be anchored to the ground and be electrically grounded for safety.
 - e. The shelter walls and roofs will have a minimum insulation rating of R11.
 - f. Each shelter will be equipped with electrical service panels, interior electrical distribution circuits, lighting, workbench and sufficient space for housing, operating, and maintaining the monitoring instruments. All electrical wiring and appurtenances will conform to the National Electric Code (NEC).
10. Air Pollutant Monitoring Stations: Location. The air pollutant monitoring stations shall be located at the following coordinates and identified as follows:
 - a. Houston Facility Upwind Monitor: Latitude: 40.259650°N, Longitude: 80.257747°W
 - b. Houston Facility Downwind Monitor: Latitude: 40.265168°N, Longitude: 80.254521°W
 - c. Houston Facility Meteorological Tower: Latitude: 40.262303°N, Longitude: 80.259761°W

- d. Siloam Facility Upwind Monitor and Meteorological Tower: Latitude: 38.733528°N, Longitude: 82.931125°W
- e. Siloam Facility Downwind Monitor: Latitude: 38.733925°N, Longitude: 82.925875°W
- f. Sherwood Facility Upwind Monitor: Latitude: 39.279169°N, Longitude: 80.691811°W
- g. Sherwood Facility Downwind Monitor: Latitude: 39.277585°N, Longitude: 80.684572°W
- h. Sherwood Meteorological Tower: Latitude: 39.277218°N, Longitude: 80.685225°W
- i. Carthage Facility Downwind Monitor: Latitude: 32.168233° N, Longitude: 94.422678° W
- j. Carthage Facility Meteorological Tower: Latitude: 32.170061° N, 94.418906° W

11. Air Pollutant Monitoring Systems: Sampler Inlet Requirements. The sampler inlets for each monitoring station shall comply with the following requirements:

- a. The sampler inlets should be 2 to 5 meters above ground and have unrestricted airflow 270 degrees around the sample inlet or 180 degrees if the sampler is on the side of a building.
- b. The sampler inlets should be >20 meters from the dripline of any tree(s).
- c. The sampler inlets should be >1 meter away from supporting structures and walls.
- d. The distance from a sampler probe to an obstacle, such as a building, should be at least twice the height the obstacle protrudes above the sampler, probe, or monitoring path.
- e. The sampler inlets should be away from minor sources, to avoid undue influences from minor sources. The separation distance is dependent on the height of the minor source's emission point, the type of fuel or waste burned, and the quality of the fuel.

12. Air Pollutant Monitoring Stations: Prohibition on Moving. Defendants shall not move the pollutant monitoring stations to a new location without prior written approval by EPA, in consultation with the Applicable State Co-Plaintiff. Movement of the pollutant monitoring station components for maintenance shall not be restricted by this Paragraph.

13. Data Acquisition System (DAS). A DAS will be used to log all numerical data generated by the air pollutant analyzers and weather instruments using a common time-stamp. The DAS also will be programmed to correct pollutant concentration data to standard temperature and pressure, and to automatically correlate pollutant data with wind direction. The DAS outputs shall be in a file format that can be used in common spreadsheet programs.

14. Nothing in this Appendix shall preclude the use of any other, additional fence line monitoring equipment and/or of monitoring other, additional pollutants at the fence line.

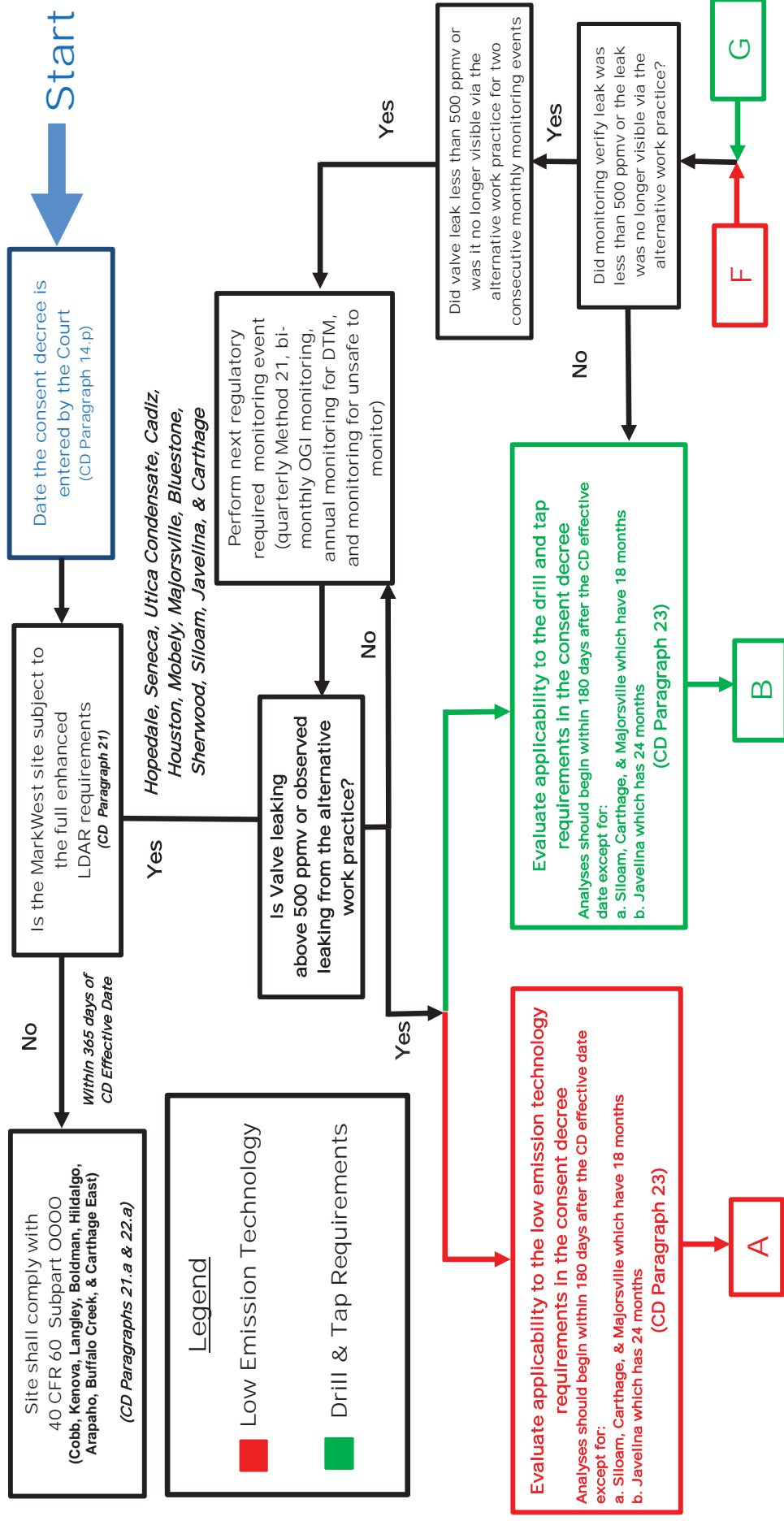
C. Operation of FLMS

15. Defendants shall comply with all terms of this Appendix and the Fence Line Monitoring Plan, including but not limited to operating and maintaining the monitors, equipment, and systems described herein, for a period of no less than three years.
16. Quality Assurance/Quality Control (QA/QC). Defendants shall ensure that all data collected by the FLMS are subjected to the approved QA/QC procedures on a quarterly basis. The QA/QC procedures for a given Quarter's data shall be completed by no later than the end of the Quarter following the Quarter within which the data were collected.
17. Annual Reports. Defendants shall provide the following information in the Annual Reports required by Section VIII of the Consent Decree: (i) the operation of the VOC and meteorological equipment as well as any maintenance and service work performed at each monitoring location; (ii) data summaries, a summary of any problems encountered in the monitoring project and the status of any current problems and corrective actions performed; (iii) a summary of any meetings or correspondence addressing the monitoring program; (iv) a synopsis of percent recovery including a brief explanation of missing data, overall data recovery, quality control, and all quality assurance documentation; and (v) fully quality assured hourly data file in Excel format and an Adobe Acrobat PDF copy of the formalized report.

APPENDIX C

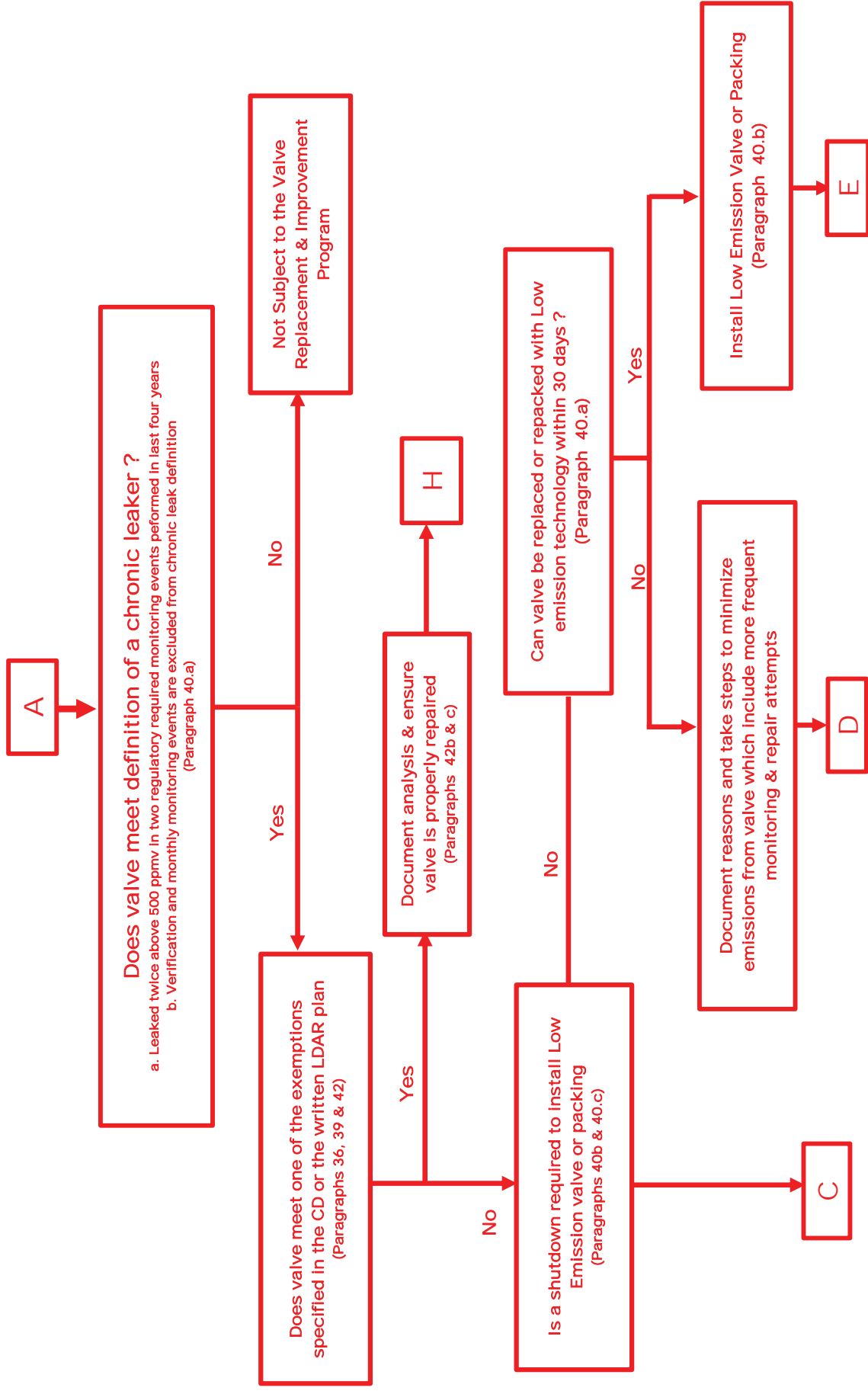
MarkWest's Enhanced LDAR Program

Requirements for Existing Valves



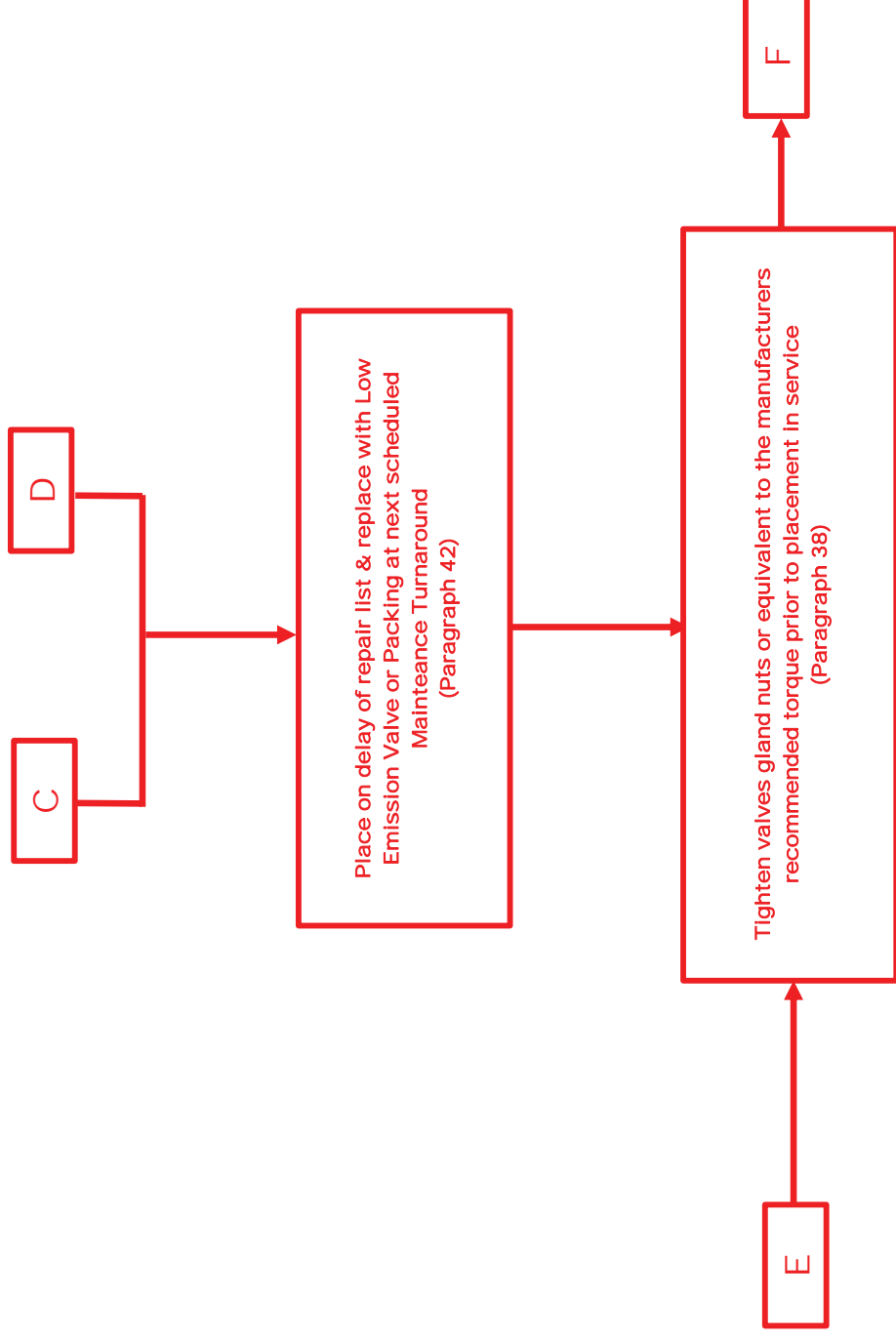
MarkWest's Enhanced LDAR Program

Requirements for Existing Valves

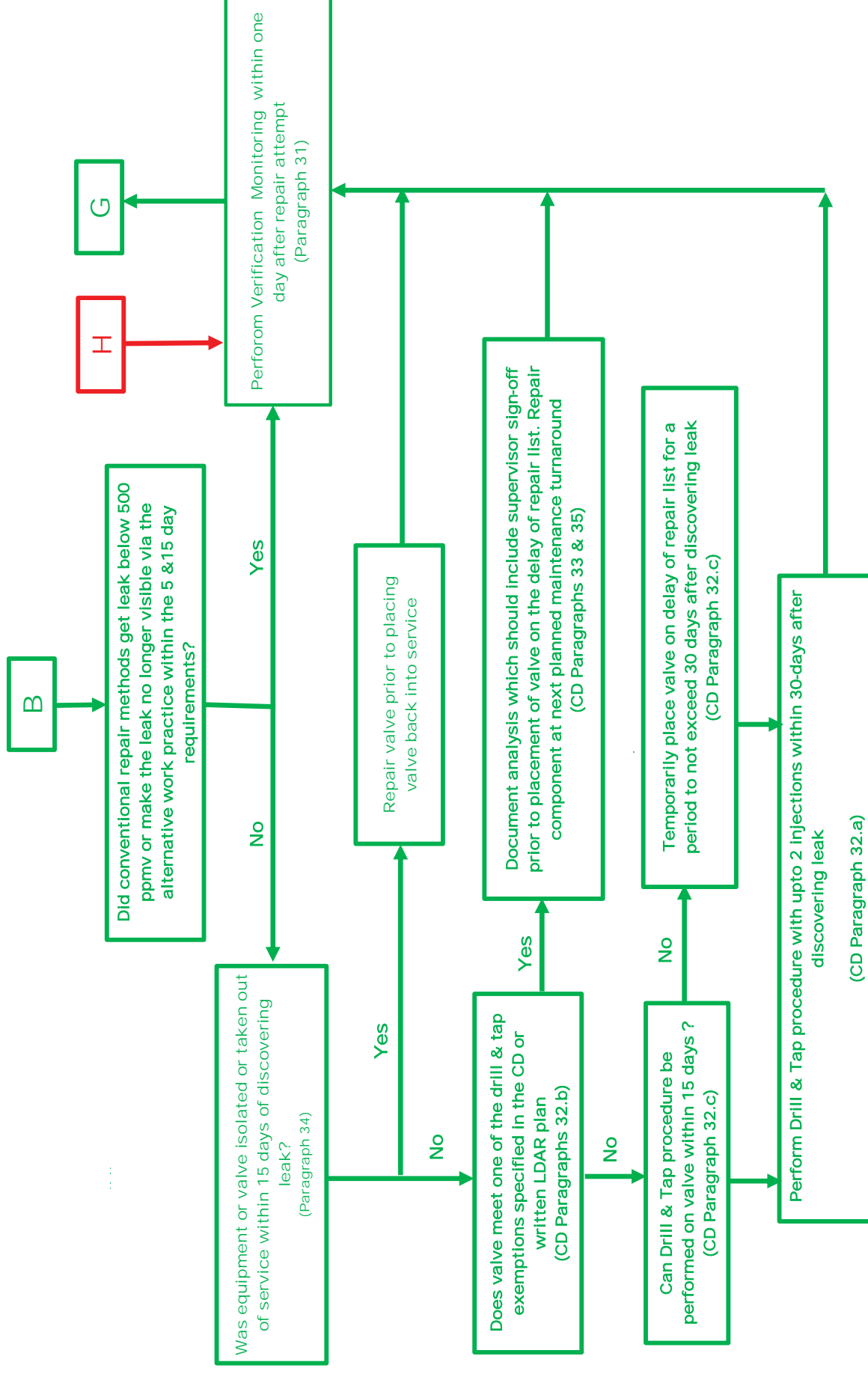


MarkWest's Enhanced LDAR Program

Requirements for Existing Valves



MarkWest's Enhanced LDAR Program Requirements for Existing Valves



MarkWest's Enhanced LDAR Program

Low Emission Requirements for New or Replacement Valves

**Bluestone, Cadiz, Hopedale,
Houston, Mobely, Sherwood,
Seneca, Sherwood, &
Utica Condensate**

180 days after
effective date of CD

Javellina

24 months
after effective

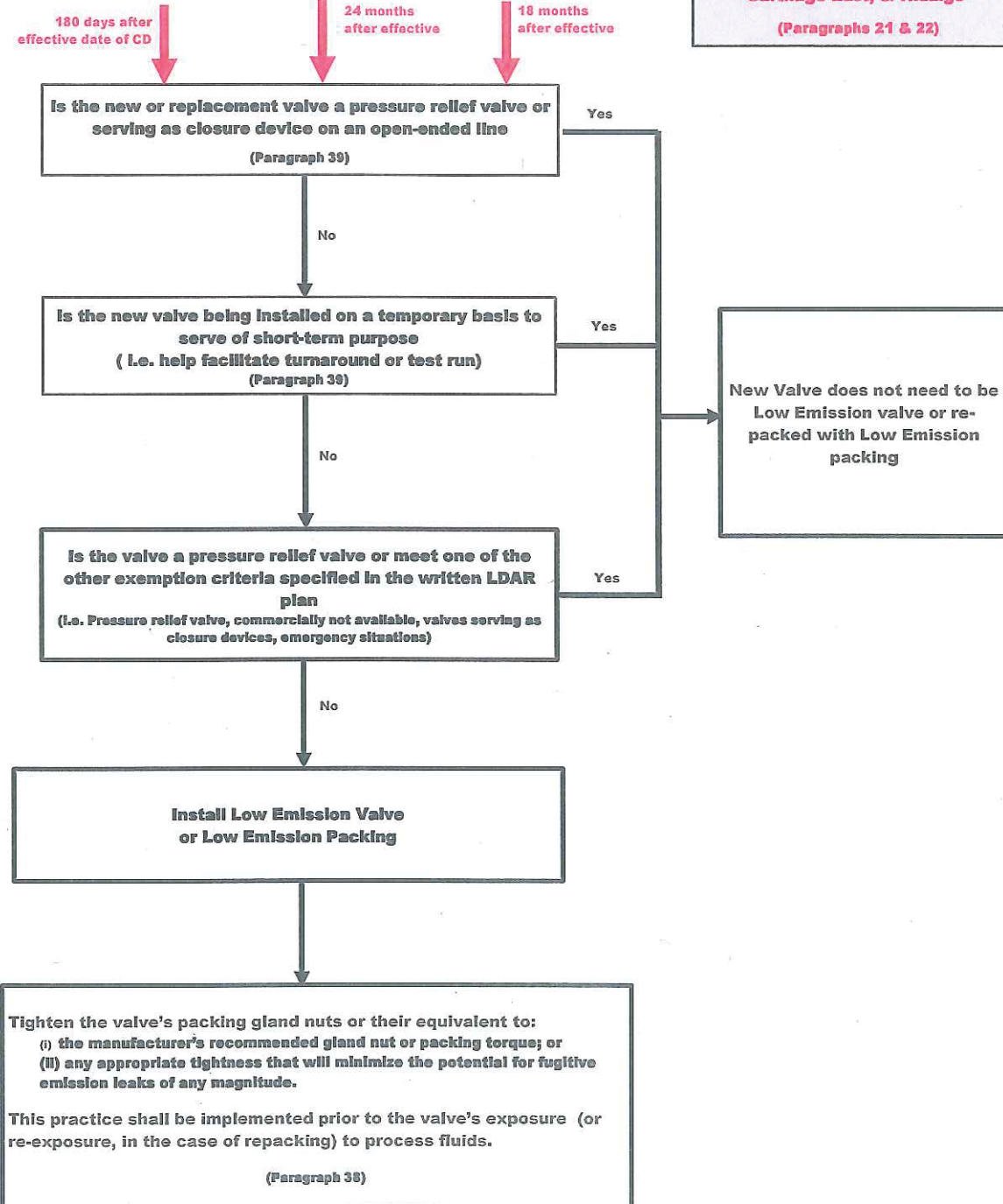
**Carthage
Siloam, &
Majorsville**

18 months
after effective

Exempt Sites

**Cobb, Kenova, Langley, Boldman
Butler-Arapaho, Buffalo Creek,
Carthage East, & Hidalgo**

(Paragraphs 21 & 22)



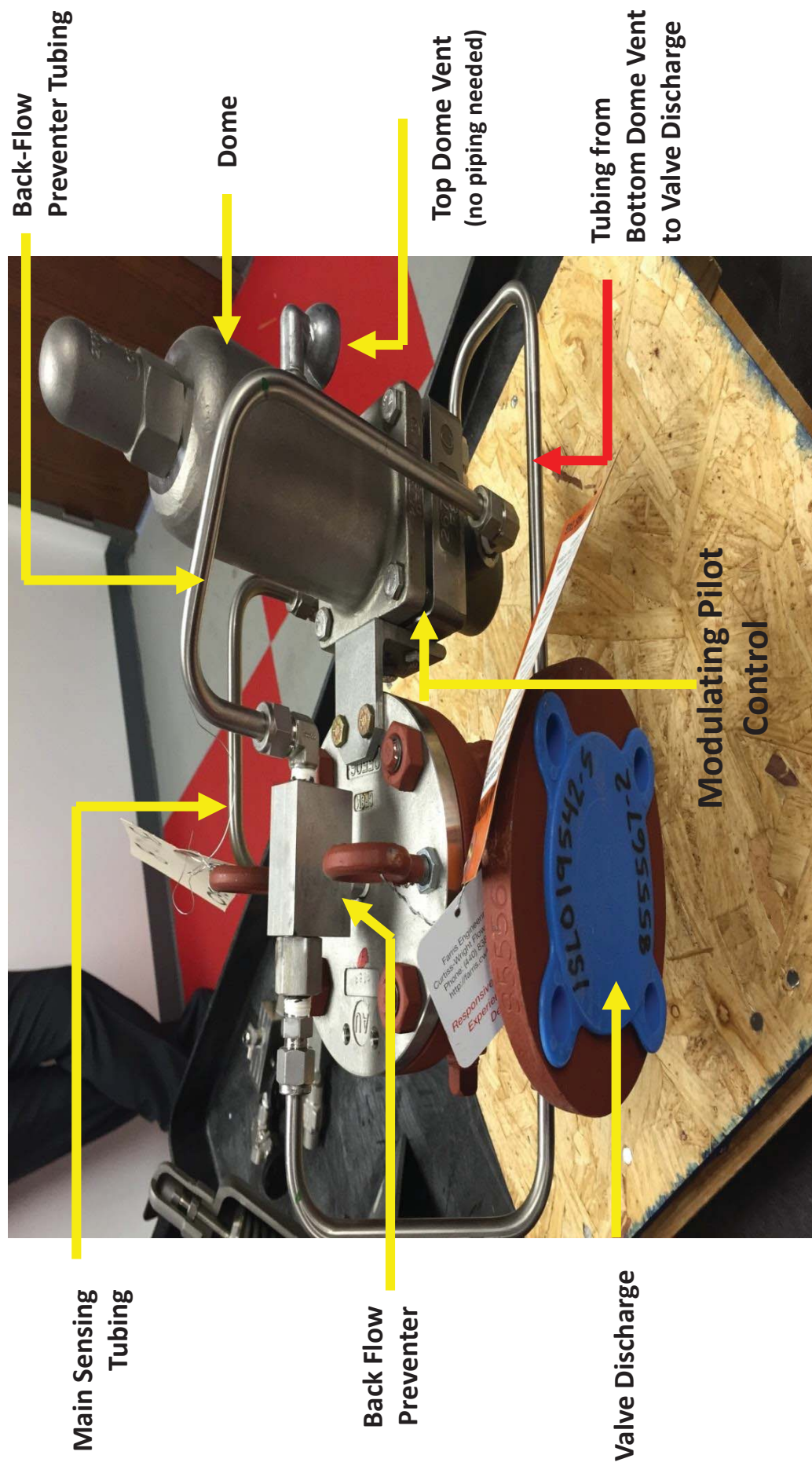
APPENDIX D



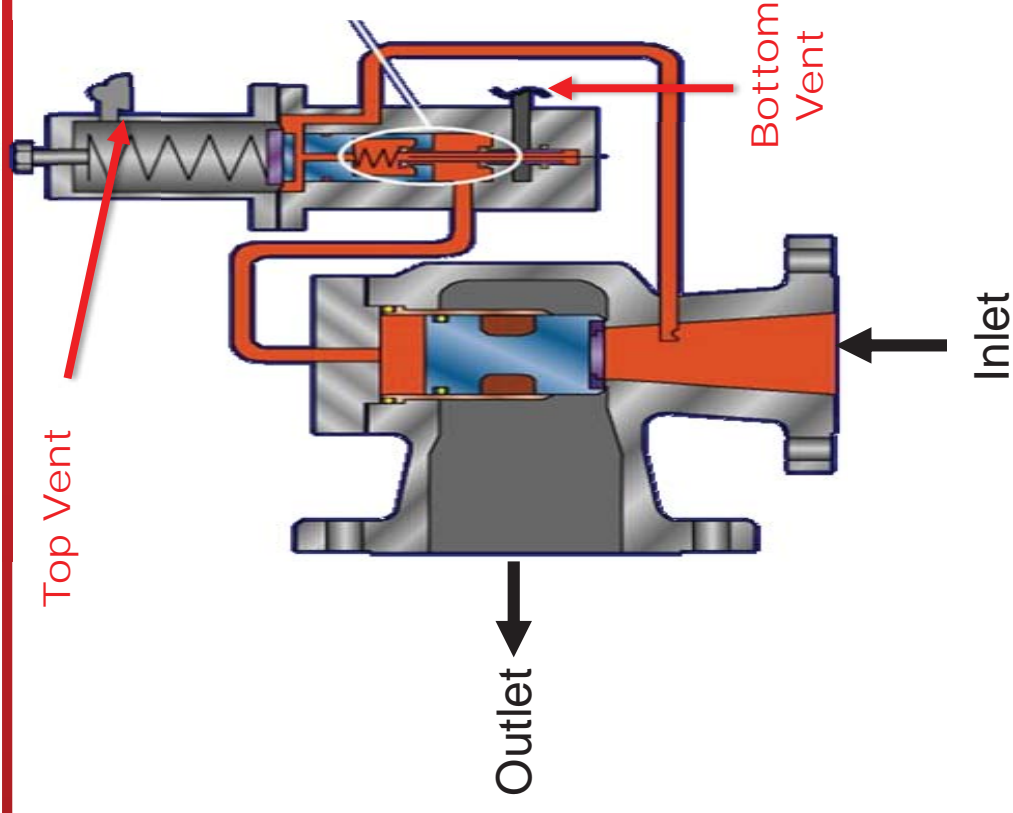
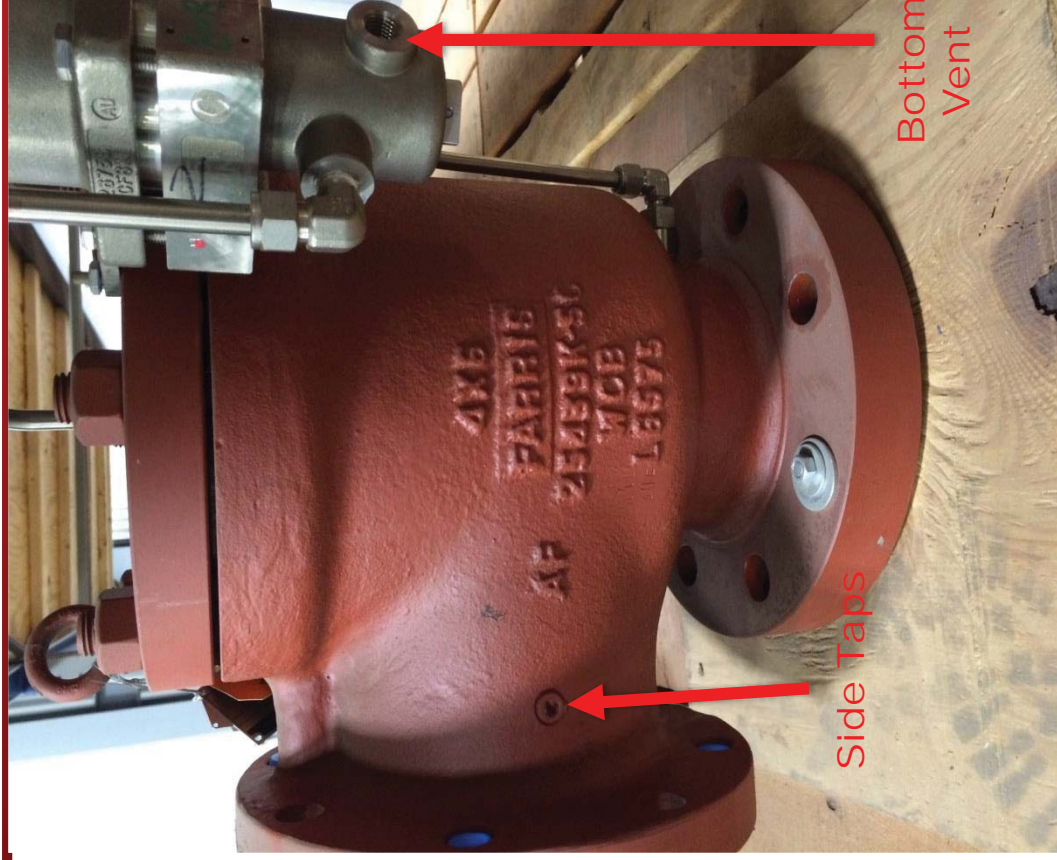
Pilot Operated Modulating Relief Valves

(CD Paragraphs 55 -61)

Modulating Pilot-Operated Pressure Relief Valves



Pilot-Operated Pressure Relief Valves (PORVs)



APPENDIX E



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 20 2015

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, L.L.C.
43050 Industrial Park Road
Cadiz, Ohio 43907

Re: Notice and Finding of Violation
MarkWest Energy Partners L.P and
MarkWest Utica EMG, L.L.C.
Jewett, Ohio

Dear Ms. McBurney:

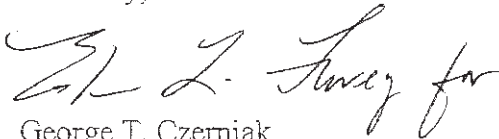
The U.S. Environmental Protection Agency is issuing the enclosed Notice and Finding of Violation (NOV/FOV) to MarkWest Energy Partners L.P. and MarkWest Utica EMG, L.L.C. (collectively MarkWest or you) under Sections 113(a)(1) and (3) of the Clean Air Act, 42 U.S.C. § 7413(a)(1) and (3). We find that you are violating the following at your Hopedale Fractionation Plant in Jewett, Ohio: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a -60.490 (Subpart VVa); (3) Standards of Performance for Volatile Organic Compounds (VOC) From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations at 40 C.F.R. §§ 60.660 – 60.668 (Subpart NNN); (4) Standards of Performance for VOC From SOCMI Reactor Processes at 40 C.F.R. §§ 60.700 – 60.708 (Subpart RRR); (5) Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 at 40 C.F.R. §§ 60.110b-117b (Subpart Kb); and (6) Permit to Install and Operate (PTIO) conditions established pursuant to the Ohio State Implementation Plan (SIP) at Ohio Administrative Code (OAC) 3745-31.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the NOV/FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the NOV/FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference. The EPA contact in this matter is Constantinos Loukeris. You may call him at (312) 353-6198 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

A handwritten signature in cursive script, appearing to read "G. T. Czerniak for".

George T. Czerniak
Director
Air and Radiation Division

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:

MarkWest Energy Partners, L.P. and
MarkWest Utica EMG, L.L.C.
Jewett, Ohio

Proceedings Pursuant to
the Clean Air Act,
42 U.S.C. §§ 7401 et seq.

)
)
) **NOTICE OF VIOLATION and**
) **FINDING OF VIOLATION**
)

) **EPA-5-15-OH-21**
)
)
)

NOTICE AND FINDING OF VIOLATION

The U.S. Environmental Protection Agency finds that MarkWest Energy Partners, L.P. and MarkWest Utica EMG, L.L.C. (collectively "MarkWest") is violating the Clean Air Act (CAA) and its implementing regulations at the company's Hopedale Fractionation Facility in Jewett, Ohio. Specifically, MarkWest is violating: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a -60.490 (Subpart VVa); (3) Standards of Performance for Volatile Organic Compounds (VOC) From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations at 40 C.F.R. §§ 60.660 – 60.668 (Subpart NNN); (4) Standards of Performance for VOC From SOCMI Reactor Processes at 40 C.F.R. §§ 60.700 – 60.708 (Subpart RRR); (5) Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 at 40 C.F.R. §§ 60.110b-117b (Subpart Kb); and (6) Permit to Install and Operate (PTIO) conditions established pursuant to the Ohio State Implementation Plan (SIP) at Ohio Administrative Code (OAC) 3745-31.

Regulatory Authority

New Source Performance Standard Subpart OOOO

1. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate regulations establishing New Source Performance Standards (NSPS).
2. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.

3. EPA promulgated Subpart OOOO on September 23, 2013. 78 Fed. Reg. 58435.
4. Subpart OOOO at 40 C.F.R. § 60.5365 states that an owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which construction, modification, or reconstruction commenced after August 23, 2011 is subject to the applicable provisions of Subpart OOOO. § 60.5365(f) states that the group of all equipment, except compressors, within a process unit is an affected facility. § 60.5365(f)(3) further provides that the equipment within a process unit of an affected facility located at onshore natural gas process plants and described in paragraph (f) of this section are exempt from Subpart OOOO if they are subject to and controlled according to Subparts VVa, GGG, or GGGa of 40 C.F.R. Part 60.
5. Subpart OOOO at 40 C.F.R. § 60.5430 defines “process unit” to mean components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.
6. Subpart OOOO at 40 C.F.R. § 60.5430 defines a “natural gas processing plant (gas plant)” as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.”
7. Subpart OOOO at 40 C.F.R. § 60.5400 sets forth equipment standards that apply to affected facilities at an onshore natural gas processing plant. This section applies to the group of all equipment, except compressors, within a process unit.
8. Subpart OOOO at 40 C.F.R. § 60.5400(a) states a subject owner or operator must comply with the equipment leak standard requirements of specific portions of Subpart VVa at 40 C.F.R. §§ 60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a., except as provided in § 60.5401.
9. Subpart OOOO at 40 C.F.R. § 60.5400(d) states that a subject owner or operator must comply with the provisions of § 60.485a of Subpart VVa except as provided in § 60.5400(f).
10. Subpart OOOO at 40 C.F.R. § 60.5400(e) states that a subject owner or operator must comply with the provisions of §§ 60.486a and 60.487a of Subpart VVa except as provided in §§ 60.5401, 60.5421, and 60.5422 of Subpart OOOO.
11. Subpart OOOO at 40 C.F.R. § 60.5400(f) states that a subject owner or operator must use the following provision instead of § 60.485a(d)(1): “Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service.”

NSPS Subpart VVa

12. EPA promulgated NSPS Subpart VVa on November 16, 2007. See 72 Fed. Reg. 64883. (Subpart VVa)
13. Subpart VVa at 40 C.F.R. § 60.482-1a(a) states “[e]ach owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§ 60.482-1a through 60.482-10a or § 60.480a(e) for all equipment within 180 days of initial startup.”
14. Subpart VVa at 40 C.F.R. § 60.482-1a(b) states “[c]ompliance with §§ 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in § 60.485a.”
15. Subpart VVa at 40 C.F.R. § 60.482-2a(a)(1) states “[e]ach pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b), except as provided in § 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period.”
16. Subpart VVa at 40 C.F.R. § 60.482-2a(a)(1) states that “each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in § 60.482-1a(f).”
17. Subpart VVa at 40 C.F.R. § 60.482-11a(a) states “[t]he owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup.”
18. Subpart VVa at 40 C.F.R. § 60.481a defines “connector” as meaning flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of process equipment or that close an opening in a pipe that could be connected to another pipe.
19. Subpart VVa at 40 C.F.R. § 60.482-11a(d) states that “when a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected” from a connector.
20. Subpart VVa at 40 C.F.R. § 60.482-7a(d)(2) states that “a first attempt at repair shall be made no later than 5 calendar days after each leak is detected” from a valve.
21. Subpart VVa at 40 C.F.R. § 60.482-6a(a)(1) states that “each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.482-1a(c) and paragraphs (d) and (e) of this section.”

22. Subpart VVa at 40 C.F.R. § 60.482-6a(a)(2) states that “the cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.”
23. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(1) states that “each valve shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b) and shall comply with paragraphs (b) through (e) of this section.”
24. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(2) states that “a valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii).”
25. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(2)(i) states that a facility must “monitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.”
26. Subpart VVa at 40 C.F.R. § 60.485a (b) states “[t]he owner or operator shall determine compliance with the standards in §§ 60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows: (1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of Appendix A-7 of this part.”
27. Subpart VVa at 40 C.F.R. § 60.482-4a provides standards for pressure relief devices in gas/vapor service. § 60.482-4a(c) provides that any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in § 60.482-10a is exempted from the requirements of paragraphs (a) and (b) of this section. § 60.482-10a establishes standards for closed vent systems and control devices used to comply with the provisions of Subpart VVa.
28. The NSPS Appendix A-7, at 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1, sets forth the technique which must be used to determine if there is a leak from a valve.

NSPS Subparts NNN/RRR

29. On June 29, 1990, EPA promulgated Subpart NNN. See 55 Fed. Reg. 26,942.
30. Subpart NNN at 40 C.F.R. § 60.660(a) states that Subpart NNN applies to each affected facility designated in paragraph (b) of this section that is part of a process unit that produces any of the chemicals listed in 40 C.F.R. § 60.667 as a product, co-product, by-product, or intermediate, except as provided in paragraph (c).
31. Subpart NNN at 40 C.F.R. § 60.660(b) states the affected facility is any of the following for which construction, modification, or reconstruction commenced after December 30, 1983:
 - a. Each distillation unit not discharging its vent stream into a recovery system.

- b. Each combination of a distillation unit and the recovery system into which its vent stream is discharged.
 - c. Each combination of two or more distillation units and the common recovery system into which their vent streams are discharged.
- 32. Subpart NNN at 40 C.F.R. § 60.661 defines "*Distillation operation*" as an operation separating one or more feed stream(s) into two or more exit stream(s), each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor-phase as they approach equilibrium within the distillation unit.
- 33. Subpart NNN at 40 C.F.R. § 60.661 defines "*Distillation unit*" as a device or vessel in which distillation operations occur, including all associated internals (such as trays or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated recovery system.
- 34. Subpart NNN at 40 C.F.R. § 60.662 states that each owner or operator of any affected facility shall comply with paragraph (a), (b), or (c) of this section for each vent stream on and after the date on which the initial performance test required by 40 C.F.R. § 60.8 and 40 C.F.R. § 60.664 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. Each owner or operator shall either:
 - a. Reduce emissions of Total Organic Compounds (TOC) (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 parts per million by volume (ppmv), on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater;
 - b. Combust the emissions in a flare that meets the requirements of 40 C.F.R. § 60.18; or
 - c. Maintain a Total Resource Effectiveness (TRE) index value greater than 1.0 without use of VOC emission control devices.
- 35. Subpart NNN at 40 C.F.R. § 60.663 sets forth the monitoring of emissions and operations for control devices including flares, boilers or process heaters, and condensers used as a final recovery device in a recovery system.
- 36. Subpart NNN at 40 C.F.R. § 60.665(a) states that each owner or operator subject to § 60.662 shall notify the Administrator of the specific provisions of 40 C.F.R. § 60.662 with which the owner or operator has elected to comply. Notification shall be submitted with the notification of initial start-up required by 40 C.F.R. § 60.7(a)(3). If an owner or operator elects at a later date to use an alternative provision of 40 C.F.R. § 60.662 with

which he or she will comply, then the Administrator shall be notified by the owner or operator 90 days before implementing a change, and upon implementing the change, a performance test shall be performed as specified by 40 C.F.R. § 60.664 within 180 days.

37. Subpart NNN at 40 C.F.R. § 60.665(b) states that each owner or operator subject to the provisions of this subpart shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 C.F.R. § 60.8. Where a boiler or process heater with a design heat input capacity of 44 megawatts (MW) (150 million Btu/hour) or greater is used to comply with 40 C.F.R. § 60.662(a), a report containing performance test data need not be submitted, but a report containing the information in 40 C.F.R. § 60.665(b)(2)(i) is required. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined.
38. On August 31, 1993, EPA promulgated Subpart RRR. See 58 Fed. Reg. 45,962.
39. Subpart RRR at 40 C.F.R. § 60.700(a) provides that Subpart RRR applies to each affected facility designated in 40 C.F.R. § 60.700(b) that is part of a process unit that produces any of the chemicals listed in 40 C.F.R. § 60.707 as a product, co-product, by-product, or intermediate, except as provided in 40 C.F.R. § 60.700(c).
40. Subpart RRR, at 40 C.F.R. § 60.700(b) states that the affected facility is any of the following for which construction, modification, or reconstruction commenced after June 29, 1990:
 - a. Each reactor process not discharging its vent stream into a recovery system.
 - b. Each combination of a reactor process and the recovery system into which its vent stream is discharged.
 - c. Each combination of two or more reactor processes and the common recovery system into which their vent streams are discharged.
41. Subpart RRR at 40 C.F.R. § 60.701 defines "*Reactor processes*" as unit operations in which one or more chemicals, or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed.
42. Subpart RRR at 40 C.F.R. § 60.702 states that each owner or operator of any affected facility shall comply with paragraph (a), (b), or (c) of this section for each vent stream on and after the date on which the initial performance test required by 40 C.F.R. § 60.8 and 40 C.F.R. § 60.704 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. Each owner or operator shall either:

- a. Reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater;
 - b. Combust the emissions in a flare that meets the requirements of § 60.18; or
 - c. Maintain a TRE index value greater than 1.0 without use of a VOC emission control device.
- 43. Subpart RRR at 40 C.F.R. § 60.703 sets forth the requirements for the monitoring of emissions and operations for control devices including flares, boilers or process heaters, and condensers used as a final recovery device in a recovery system.
- 44. Subpart RRR, at 40 C.F.R. § 60.705(a), states that each owner or operator subject to 40 C.F.R. § 60.702 shall notify the Administrator of the specific provisions of 40 C.F.R. § 60.702 with which the owner or operator has elected to comply. Notification shall be submitted with the notification of initial start-up required by 40 C.F.R. § 60.7(a)(3). If an owner or operator elects at a later date to use an alternative provision of 40 C.F.R. § 60.702 with which he or she will comply, then the Administrator shall be notified by the owner or operator 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by 40 C.F.R. § 60.704 no later than 180 days from initial start-up.
- 45. Subpart RRR at 40 C.F.R. § 60.705(b) states that each owner or operator subject to the provisions of this subpart shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 C.F.R. § 60.8. Where a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used or where the reactor process vent stream is introduced as the primary fuel to any size boiler or process heater to comply with 40 C.F.R. § 60.702(a), a report containing performance test data need not be submitted, but a report containing the information in 40 C.F.R. § 60.705(b)(2)(i) is required. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined.

NSPS Subpart Kb

- 46. On April 8, 1987, EPA promulgated Subpart Kb. See 52 Fed. Reg. 11,429.
- 47. Subpart Kb at 40 C.F.R. § 60.110b(a) states that except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 75 cubic meters (m^3) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.

48. Subpart Kb at 40 C.F.R. § 60.112b(a) states that the owner or operator of each storage vessel either with a design capacity greater than or equal to 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m³ but less than 151 m³ containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of four compliance options, including, at § 60.112b(a)(3), the following option:

(3) A closed vent system and control device meeting the following specifications:

- (i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in Part 60, Subpart VV, §60.485(b).
- (ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

PTIO Permit P0116897

49. Section 110(a)(1) of the CAA, 42 U.S.C. § 7410(a)(1), requires each state to adopt and submit to EPA for approval a SIP that provides for the implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS). Under Section 110(a) of the CAA, 42 U.S.C. § 7410(a), each SIP must include a permit program to regulate the modification and construction of any stationary source of air pollution as necessary to assure that NAAQS are achieved. Pursuant to Section 113(a) and (b) of the CAA, 42 U.S.C. § 7413(a) and (b), upon EPA approval, SIP requirements are federally enforceable under Section 113. Under 40 C.F.R. § 52.23, any permit limitation or condition contained within a permit issued under an EPA-approved program that is incorporated in a SIP, is a requirement of the SIP, and is federally enforceable under Section 113.
50. On February 20, 2013, EPA approved revisions to OAC 3745-31, the regulations governing the Ohio PTIO program, as part of the federally enforceable SIP for the State of Ohio. See 78 Fed. Reg. 11,748.
51. On October 14, 2014, Ohio EPA issued to the Hopedale Fractionation Plant PTIO Permit No. P0116897. Condition C.2.b.2.a of the PTIO provides that for any transfer of natural gas liquids from a pressurized storage tank to a railcar, the displaced vapors shall be collected from a vapor recovery system. The vapor recovery system shall be equipped with a vapor tight vapor line from the pressurized storage tanks to the rail vessels and a means to ensure that the vapor line is connected before natural gas liquids are transferred. The vapor recovery system shall be designed and operated to route at least 98.7 percent of displaced vapors from the loading process back to the pressurized storage tanks.

Findings of Fact

52. MarkWest owns and operates an onshore natural gas processing plant, at 6155 E. US Route 6, Jewett, Ohio, called the Hopedale Fractionating Plant (HFP), which removes natural gas liquids from field gas and fractionates the natural gas liquids.
53. On December 12, 2013, MarkWest notified Ohio EPA that the HFP is subject to Subpart OOOO (and by reference Subpart VVa) and Subpart Kb.
54. EPA conducted an inspection of the HFP on May 26-28, 2015 (May 2015 inspection).
55. During the May 2015 inspection, EPA identified at least 24 fin fan assemblies, containing approximately 510 connectors per assembly, which are not included in MarkWest's LDAR program and have not been monitored in accordance with Subpart VVa.
56. Since January 2014, MarkWest produces propane, listed in 40 C.F.R. §§ 60.667 and 60.707, as a product, co-product, by-product, or intermediate from the two depropanizers (one in the FRAC1 process unit and one in the FRAC2 process unit).
57. Since January 2014, MarkWest produces n-butane, butanes, mixed, and/or isobutane, all listed in 40 C.F.R. §§ 60.667 and 60.707, as a product, co-product, by-product, or intermediate from the debutanizer and deisobutanizer in the FRAC2 process unit.
58. MarkWest operates distillation units in the FRAC1 and FRAC2 process units at the HFP.
59. MarkWest operates reactor processes in the FRAC1 and FRAC2 process units at the HFP.
60. MarkWest's distillation units and reactor processes in the FRAC1 and FRAC2 process units are affected facilities subject to Subparts NNN and RRR, respectively.
61. MarkWest has not submitted a notification that the HFP's distillation units and reactor processes are subject to Subparts NNN and RRR, respectively.
62. MarkWest operates two 6,360 m³ (~40,000 barrels) natural gasoline storage tanks that are subject to Subpart Kb.
63. During the May 2015 inspection, EPA observed the pressure relief devices on each of the natural gasoline storage tanks to be venting to atmosphere using a FLIR® GF-320, as confirmed by MarkWest using a portable VOC instrument with the following readings:
 - a. Tag# 11251 – 1,977 ppm
 - b. Tag# 11252 – 26,297 ppm
 - c. Tag# 2845 – 4,781 ppm
64. In reviewing MarkWest's leak history, EPA discovered the following leaks that did not have a first attempt at repair within 5 days:

Tag #	Leak Date	Component Type
000687	2/18/2015	Valve
003383	12/9/2014	Connector

65. For the three quarterly monitoring events since July 2015, MarkWest reported an average of 0.98% as the percentage of valves leaking in the FRAC1, Railroad, and Truck Loading process units whereas EPA found a 2.89% leaking rate during the May 2015 inspection.
66. MarkWest utilizes a flare to control emissions from pressure relief devices at the HFP to comply with requirements for pressure relief devices under Subparts OOOO and VVa.
67. MarkWest operates approximately 75 pilot designed pressure relief devices throughout the HFP. These pilot pressure relief devices are designed to release gas directly to atmosphere from the pilot vents with any overpressure greater than 1 percent and up to 15 percent prior to actuating the main pressure-relief valve to the flare.
68. During the May 2015 inspection, EPA identified a pressure relief device (Tag # 000829) at the FRAC1 process unit venting to atmosphere using a portable VOC instrument (2,800 ppm), and confirmed by MarkWest tagging the pressure relief device as leaking.
69. During the May 2015 inspection, EPA observed several connections between the loading arm and the top of the railcar to not be vapor tight or capturing all the material being loaded, based upon identifying vented VOC emissions using a FLIR® GF-320 and portable VOC instrument with the following readings:

Tag #	Equipment	EPA Reading (ppm)	MarkWest Reading (ppm)
4470	Hoses	830	Not Confirmed
5026	Hoses	722	Not Confirmed
4706	Hoses	1,300	6,378
4353	Connector 1 on Hose (Bay 5 South)	18,000	17,079
4353	Connector 2 on Hose (Bay 5 South)	25,000	Flameout
4035	Connector 1 on Hose (Bay 4 South)	16,000	Not Confirmed

Violations

70. MarkWest failed to perform Method 21 properly on 5 insulated valves (4 valves in FRAC1 and 1 valve in FRAC2), in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-

7a(a)(1) (and by reference § 60.485(b)) and 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1.

71. MarkWest failed to identify and monitor 10 valves (8 bleeder valves in FRAC1 and 2 bleeder valves in FRAC2) subject to the standards set forth at 40 C.F.R. §§ 60.5400(a) and 60.482-1a to 60.482-11a, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(a)(1).
72. MarkWest failed to perform Method 21 properly on valves per paragraph 65, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(a)(1), and 40 C.F.R. Part 60 Method 21, §§ 8.3.1 and 8.3.1.1, from at least July 2014 until May 2015.
73. MarkWest failed to perform the initial monthly monitoring of all pumps in each process unit at the HFP within 30 days after the end of the startup period in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-2a(a)(1).
74. MarkWest failed to perform annual monitoring on all connectors (specifically all fin fans in VOC service) in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-11a(a).
75. MarkWest failed to perform initial monthly monitoring of all valves within 30 days in process unit at the HFP after the initial startup date in violation of 40 C.F.R. §§ 60.5400(a), 60.482-7a(a)(2), and 60.482-7a(a)(1).
76. MarkWest failed to equip each open-ended valve or line (Tag# 3092, the Butane 3A hose in Truck Loading process unit, and vapor recovery hose for Natural Gasoline West line in Truck Loading process unit) with a cap, blind flange, plug, or a second valve in violation of 40 C.F.R. §§ 60.54.00(a) and 60.482-6a(a)(1).
77. MarkWest failed to seal each open-ended valve or line (closure devices associated with Tag #'s: 001438, 000890, 3224, 3460, 4313, 3926A) with a cap, blind flange, plug, or a second valve in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-6a(a)(2).
78. MarkWest failed to perform weekly visual inspections on pumps in each of the process units at the HFP for the period of January 2014 through February 2015 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482a(a)(2).
79. MarkWest failed to make timely first attempts at repairs within 5 days on the valve listed in paragraph 64 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(d)(2).
80. MarkWest failed to make timely first attempts at repairs within 5 days on the connector listed in paragraph 64 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-11a(d).
81. MarkWest failed to demonstrate compliance with the provisions of Subpart NNN for its distillation operations and meet Subpart NNN's various monitoring, recordkeeping, and reporting requirements, in violation of 40 C.F.R. §§ 60.662, 60.663, 60.665(a), and 60.665(b).

82. MarkWest failed to demonstrate compliance with the provisions of Subpart RRR for its reactor processes and meet Subpart RRR's various monitoring, recordkeeping, and reporting requirements, in violation of 40 C.F.R. § 60.702, 60.703, 60.705(a), and 60.705(b).
83. Based on pressure relief device design information and VOC monitoring conducted during the May 2015 inspection, MarkWest has failed to comply with closed vent and control device requirements for pilot-designed pressure relief devices at the HFP, in violation of 40 C.F.R. §§ 60.5400(a) and § 60.482-4a(c). Further, MarkWest has failed to comply with the emission control requirements of Subpart NNN and Subpart RRR with respect to uncontrolled vented emissions from the pilot designed pressure relief devices associated with subject distillation operations and reactor processes, in violation of 40 C.F.R. §§ 60.662 and 60.702, respectively.
84. Based on observations of uncontrolled vented emissions from pressure relief devices on the two natural gasoline storage tanks at the inspection of the HFP, MarkWest failed to design a closed-vent system on each natural gasoline storage vessel that collects all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background in violation of 40 C.F.R. § 60.112b(a)(3)(i). Moreover, MarkWest failed to reduce inlet VOC emissions by 95 percent or greater for each natural gasoline storage vessel in violation of 40 C.F.R. § 60.112b(a)(3)(ii).
84. MarkWest failed to operate a vapor tight vapor line on transfers of natural gas liquids from a pressurized storage tank to a railcar in violation of Condition C.2.b.2.a of PTIO Permit No. P0116897.

Enforcement Authority


85. Sections 113(a)(1) and (3) of the CAA, 42 U.S.C. § 7413(a)(1) and (3), provide that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement or prohibition of, *inter alia*, an applicable SIP or permit, any rule promulgated under the NSPS requirements of Section 111(e) of the CAA, 42 U.S.C. § 7411(e), Title V of the CAA, 42 U.S.C. §§ 7661-7661f, or any rule or permit issued thereunder, the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

Environmental Impact of Violations

86. MarkWest's above-referenced violations have caused excess emissions of VOC.
87. Excess VOC emissions can cause eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to the liver, kidney, and central nervous system. Some organics can cause cancer in animals and some are suspected or known to cause cancer in humans.

88. VOC emissions are a precursor to ground-level ozone. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.

9/20/15
Date


George T. Czerniak
Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Finding of Violation, No. EPA-5-15-OH-21, by Certified Mail, Return Receipt Requested, to:

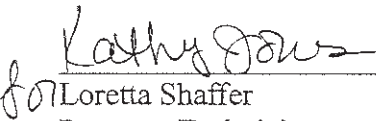
Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, LLC
43050 Industrial Park Road
Cadiz, Ohio 43907

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43266-1049

Melisa Witherspoon
APC Manager, Southeast District Office
Ohio Environmental Protection Agency
2195 Front Street
Logan, Ohio 43138

On the 8th day of October 2015.


for Loretta Shaffer
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER:

7014 2870 0001 9581 4403

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Finding of Violation, No. EPA-5-15-OH-21, by Certified Mail, Return Receipt Requested, to:


Heather McBurnery, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, LLC
101 E. Market Street
Cadiz, Ohio 43907

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43266-1049

Melisa Witherspoon
APC Manager, Southeast District Office
Ohio Environmental Protection Agency
2195 Front Street
Logan, Ohio 43138

On the 21st day of September 2015.


for Loretta Shaffer
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7014 2870 0001 9581 4236

APPENDIX F



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

APR 04 2016

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. David Ettore
MarkWest Liberty Midstream E Resources, LLC
601 Technology Drive
Suite 130
Canonsburg, PA 15317

Dear Mr. Ettore:

Enclosed is a Notice of Noncompliance ("NON") alleging violations of the Clean Air Act ("CAA") at MarkWest Liberty Midstream's natural gas processing plant, located in Houston, PA. Specifically, the NON alleges violation of 40 C.F.R. Part 60 Subparts KKK, NNN, and OOOO.

The NON stipulates that MarkWest may request a conference with EPA to discuss the violations within fourteen (14) calendar days of the receipt of this letter. To request a conference, or if you have any questions regarding this NON, you may contact Bruce Augustine, of the Air Protection Division, at (215) 814-2131 or Mr. Dennis Abraham, Senior Assistant Regional Counsel, at (215) 814-5214.

Sincerely,

A handwritten signature in blue ink, which appears to read "Nikos D. Singelis", is written over a horizontal line.

Nikos Singelis, Acting Director
Air Protection Division

cc: Melissa Baggam, PADEP

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

IN THE MATTER OF:

MarkWest Liberty Midstream & Resources, LLC,	:	NOTICE OF NONCOMPLIANCE and
800 Western Avenue, Chartiers, Twp.,	:	FINDING OF VIOLATION
Washington, County, PA 15317	:	EPA Docket No. CAA-03-2016-0008
	:	
	:	Proceedings Pursuant to the Clean Air Act
	:	42 U.S.C. §§ 7401 et seq.

STATUTORY AUTHORITY

This Notice of Noncompliance and Finding of Violation is issued pursuant to Section 113(a)(3) of the Clean Air Act (“CAA” or the “Act”), as amended on November 15, 1990 by P.L. 101-549, 42 U.S.C. §7413(a)(3), to MarkWest Liberty Midstream & Resources, LLC (“Respondent”) for violations of the CAA and its implementing regulations at the company’s onshore natural gas process plant, located at 800 Western Avenue, Chartiers Township, Washington County, Pennsylvania 15317 (the “Facility”). Specifically, the United States Environmental Protection Agency, Region III (“EPA” or the “Agency”) finds that Respondent is violating: 1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (“Subpart OOOO”); (2) Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011 at 40 C.F.R. Part 60, Subpart KKK (“Subpart KKK”); and (3) Standards of Performance for Volatile Organic Compounds (VOC) From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations at 40 C.F.R. §§ 60.660 – 60.668 (“Subpart NNN”).

Section 113(a)(3) of the Act provides that except for a requirement or prohibition enforceable under Sections 113(a)(1) and (2) of the Act, 42 U.S.C. §§7413(a)(1) and (2), whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any other requirement or prohibition of this subchapter, including, but not limited to, a requirement or prohibition of any rule, plan, order, waiver, or permit promulgated, issued, or approved under those provisions, the Administrator may (A) issue an administrative penalty order; (B) issue an order requiring such person to comply with such requirement or prohibition; (C) bring a civil action for enforcement; or (D) request that the Attorney General commence a criminal action for criminal penalties. A description of the regulatory background, the relevant facts, and a list of the specific violations identified by EPA are outlined below. The geographical jurisdiction of EPA Region III includes the Commonwealth of Pennsylvania.

Regulatory Authority

New Source Performance Standards- Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution)

1. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate regulations establishing New Source Performance Standards (“NSPS”).
2. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.
3. EPA promulgated Subpart OOOO on August 16, 2012. 77 Fed. Reg. 49,490.
4. Subpart OOOO at 40 C.F.R. § 60.5365 states that an owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which construction, modification, or reconstruction commenced after August 23, 2011 is subject to the applicable provisions of Subpart OOOO. 40 C.F.R. § 60.5365(f) states that the group of all equipment, except compressors, within a process unit is an affected facility. 40 C.F.R. § 60.5365(f)(3) further provides that the equipment within a process unit of an affected facility located at onshore natural gas process plants and described in paragraph (f) of this section are exempt from Subpart OOOO if they are subject to and controlled according to Subparts VVa, GGG, or GGGa of 40 C.F.R. Part 60.
5. Subpart OOOO at 40 C.F.R. § 60.5430 defines “onshore” to mean all facilities except those that are located in the territorial seas or the outer continental shelf.
6. Subpart OOOO at 40 C.F.R. § 60.5430 defines “process unit” to mean components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.
7. Subpart OOOO at 40 C.F.R. § 60.5430 defines a “natural gas processing plant (gas plant)” as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.”
8. Subpart OOOO at 40 C.F.R. § 60.5400 sets forth equipment standards that apply to affected facilities at an onshore natural gas processing plant. This section applies to the group of all equipment, except compressors, within a process unit.

9. Subpart OOOO at 40 C.F.R. § 60.5400(a) identifies what equipment standards apply to affected facilities at an onshore natural gas processing plants. Subpart OOOO references 40 C.F.R. Part 60, Subpart VVa (Standards of Performance for Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006) and states that a subject owner or operator must comply with the equipment leak standard requirements of specific portions of Subpart VVa at 40 C.F.R. §§ 60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a., except as provided in § 60.5401.
10. Subpart OOOO at 40 C.F.R. § 60.5400(d) states that a subject owner or operator must comply with the provisions of § 60.485a of Subpart VVa except as provided in § 60.5400(f).
11. Subpart OOOO at 40 C.F.R. § 60.5400(e) states that a subject owner or operator must comply with the provisions of §§ 60.486a and 60.487a of Subpart VVa except as provided in §§ 60.5401, 60.5421, and 60.5422 of Subpart OOOO.
12. Subpart OOOO at 40 C.F.R. § 60.5400(f) states that a subject owner or operator must use the following provision instead of § 60.485a(d)(1): “Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service.”
13. The NSPS Appendix A-7, at 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1, sets forth the technique which must be used to determine if there is a leak from a valve.

NSPS Subpart NNN (Standards of Performance for VOC From Synthetic Organic Chemical Manufacturing Industry Distillation Operations)

14. On June 29, 1990, EPA promulgated Subpart NNN. *See* 55 Fed. Reg. 26,942.
15. Subpart NNN at 40 C.F.R. § 60.660(a) states that Subpart NNN applies to each affected facility designated in paragraph (b) of this section that is part of a process unit that produces any of the chemicals listed in 40 C.F.R. § 60.667 as a product, co-product, by-product, or intermediate, except as provided in paragraph (c).
16. Subpart NNN at 40 C.F.R. § 60.660(b) states the affected facility is any of the following for which construction, modification, or reconstruction commenced after December 30, 1983:
 - a. Each distillation unit not discharging its vent stream into a recovery system.
 - b. Each combination of a distillation unit and the recovery system into which its vent stream is discharged.

- c. Each combination of two or more distillation units and the common recovery system into which their vent streams are discharged.
- 17. Subpart NNN at 40 C.F.R. § 60.661 defines “*Distillation operation*” as an operation separating one or more feed stream(s) into two or more exit stream(s), each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor-phase as they approach equilibrium within the distillation unit.
- 18. Subpart NNN at 40 C.F.R. § 60.661 defines “*Distillation unit*” as a device or vessel in which distillation operations occur, including all associated internals (such as trays or packing) and accessories (such as reboiler, condenser, vacuum pump, steam jet, etc.), plus any associated recovery system.
- 19. Subpart NNN at 40 C.F.R. § 60.662 states that each owner or operator of any affected facility shall comply with paragraph (a), (b), or (c) of this section for each vent stream on and after the date on which the initial performance test required by 40 C.F.R. § 60.8 and 40 C.F.R. § 60.664 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. Each owner or operator shall either:
 - a. Reduce emissions of Total Organic Compounds (“TOC”) (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 parts per million by volume (“ppmv”), on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater;
 - b. Combust the emissions in a flare that meets the requirements of 40 C.F.R. § 60.18; or
 - c. Maintain a Total Resource Effectiveness (“TRE”) index value greater than 1.0 without use of VOC emission control devices.
- 20. Subpart NNN at 40 C.F.R. § 60.663 sets forth the monitoring of emissions and operations for control devices including flares, boilers or process heaters, and condensers used as a final recovery device in a recovery system.
- 21. Subpart NNN at 40 C.F.R. § 60.665(a) states that each owner or operator subject to § 60.662 shall notify the Administrator of the specific provisions of 40 C.F.R. § 60.662 with which the owner or operator has elected to comply. Notification shall be submitted with the notification of initial start-up required by 40 C.F.R. § 60.7(a)(3). If an owner or operator elects at a later date to use an alternative provision of 40 C.F.R. § 60.662 with which he or she will comply, then the Administrator shall be notified by the owner or

operator 90 days before implementing a change, and upon implementing the change, a performance test shall be performed as specified by 40 C.F.R. § 60.664 within 180 days.

22. Subpart NNN at 40 C.F.R. § 60.665(b) states that each owner or operator subject to the provisions of this subpart shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under 40 C.F.R. § 60.8. Where a boiler or process heater with a design heat input capacity of 44 megawatts (“MW”) (150 million Btu/hour) or greater is used to comply with 40 C.F.R. § 60.662(a), a report containing performance test data need not be submitted, but a report containing the information in 40 C.F.R. § 60.665(b)(2)(i) is required. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined.

NSPS Subpart KKK (Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011)

22. EPA promulgated Subpart KKK on June 24, 1985. 50 FR 26124.
23. Subpart KKK at 40 C.F.R. §60.630(a)(1) states that the provisions of this subpart apply to affected facilities in onshore natural gas processing plants.
24. Subpart KKK at 40 C.F.R. §60.630a)(3) states that the group of all equipment except compressors within a process unit is an affected facility.
25. Subpart KKK at 40 C.F.R. §60.630(b) states that any affected facility under paragraph (a) of this section that commences construction, reconstruction, or modification after January 20, 1984, and on or before August 23, 2011, is subject to the requirements of this subpart.
26. Subpart KKK at 40 C.F.R. §60.631 defines “equipment” as “each pump, pressure relief device, open-ended valve or line, valve, compressor, and flange or other connector that is in VOC service, and any device or system required by this subpart.”
27. Subpart KKK at 40 C.F.R. §60.631 defines “field gas” as “feedstock gas entering the natural gas processing plant.”
28. Subpart KKK at 40 C.F.R. §60.631 defines “in light liquid service” to mean “the piece of equipment [that] contains a liquid that meets the conditions specified in §60.485(e) or §60.633(h)(2).”
29. Subpart KKK at 40 C.F.R. §60.631 defines “natural gas liquids” as the hydrocarbons, such as ethane, propane, butane, and pentane, that are extracted from field gas.”
30. Subpart KKK at 40 C.F.R. §60.631 “natural gas processing plant (gas plant) as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.”

31. Subpart KKK at 40 C.F.R. §60.631 defines “onshore” as “all facilities except those that are located in the territorial seas or on the outer continental shelf.”

32. Subpart KKK at 40 C.F.R. §60.631 defines “process unit” as equipment assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient storage facilities for the products.”

33. Subpart KKK at 40 C.F.R. §60.632 states that each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1(a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup.”

FINDINGS OF FACT

34. Respondent, MarkWest Liberty Midstream & Resources, LLC, is a subsidiary of MarkWest Energy Partners, L.P.

35. On December 4, 2015, a merger was completed between MarkWest Energy Partners, L.P. and MPLX Energy Logistics (“MPLX”), a subsidiary of Marathon Petroleum Corporation. The deal creates one of the nation’s largest natural gas processing companies. MarkWest Energy Partners, L.P. is now a wholly owned subsidiary of MPLX.

36. Respondent, MarkWest Liberty Midstream & Resources, LLC, is incorporated and registered to do business in the state of Delaware.

37. Respondent is the present owner and operator of the Facility and has been the owner and operator of the Facility at all times relevant to this Notice of Noncompliance/Finding of Violation.

38. Respondent is a “person” as that term is defined in Section 302(e) of the Act, 42 U.S.C. §7602(e).

39. The Facility is an onshore natural gas processing plant (as that term is defined at 40 C.F.R. §§ 60.631 and 60.5430), because it is engaged in operations associated with the processing of natural gas products, including the gathering, processing and transportation of natural gas and natural gas liquids.

40. The Facility was initially constructed and commenced operation in or around October of 2008 (after January 20, 1984 and before August 23, 2011 – the applicability date for NSPS Subpart KKK, related to equipment within process units at onshore natural gas process units constructed during that time period).

41. Portions of the Facility that were constructed, modified or reconstructed before August 23, 2011 are subject to Subpart KKK (and by reference, the equipment leak standard requirements set forth in the provisions of Subpart VV). Other portions of the Facility that were constructed, modified or reconstructed on or after August 23, 2011 are subject to Subpart OOOO (and by reference, the equipment leak standard requirements set forth in the provisions of Subpart VVa), because those portions are located at an onshore natural gas processing plant which is engaged in the extraction of natural gas liquids from field gas, the fractionation of mixed natural gas liquids to natural gas products or both, and portions of the Facility have equipment located in affected process units that were constructed or modified after August 23, 2011.

42. The Facility receives raw field gas from natural gas wells and separates the natural gas from the remaining constituents of the gas (ethane, butane, propane and natural gasoline). There are currently four (4) “plants” operating at the Facility which contain a combination of de-ethanizers, de-propenizers, and de-butanizers, which are used to separate the different constituents of the natural gas. “Plant 4” was under construction at the time of EPA’s April 28-30, 2015 compliance inspection. Plant 4 has the capacity to process an additional 200 million standard cubic feet per day (“MMscf/day”) of natural gas. The Facility currently processes an average of 325-330 MMscf/day of natural gas, while the total capacity of the Facility to process natural gas is 550MMscf/day. There are two (2) flares located at the Facility, which are used to control process upsets and process blowdowns from the various plants and truck loadout. There is also a portable flare located within the railcar area of the Facility. The rail yard is considered part of the MarkWest Houston Gas Plant for emission inventory purposes.

43. The Facility is identified in a Plan Approval issued on October 4, 2012 by the Pennsylvania Department of Environmental Protection (“PADEP”) (Plan Approval No. 63-00936F) to the owner, “MarkWest Liberty Midstream & Resources/Houston Gas PLT”, located in Chartiers Township, Washington County, PA. The Plan Approval was issued as an extension of previous plan approvals, beginning in July 2008 (See, Plan Approval GP5-63-00936).

44. The Plan Approval terms and conditions provide that Respondent must comply with the applicable requirements of Subparts KKK and OOOO for equipment leaks of VOC from onshore natural gas processing plants, including the implementation of a leak detection and repair (“LDAR”) program performed to minimize VOC emissions.

45. The Facility is currently permitted as a minor source for all criteria pollutants and hazardous air pollutants (“HAPs”). The Facility is located in an area that is designated as attainment for nitrogen Oxide (“NOx”), sulfur dioxide (“SO2”) and particulate matter (“PM”), and marginal non-attainment for ozone.

46. On the dates of April 28-30, 2015, duly authorized representatives from EPA Region 3 and PADEP conducted an air compliance inspection of the Facility, as part of EPA’s national enforcement initiative pertaining to the oil and gas industry (the “April 2015 Air Compliance Inspection”). The scope of the April 2015 Air Compliance Inspection included on-site LDAR monitoring over a period of three (3) days, with the use of a digital camera for documentation

photographs. EPA inspectors also utilized a forward looking infrared radiation (“FLIR”) thermal imaging camera to observe and obtain video documentation of emission leaks at the Facility. The Respondent was notified of the inspection in advance on April 27, 2015.

47. During the April 2015 Air Compliance Inspection, David Ettore, Respondent’s plant representative or “responsible official” for Facility operations (as that term is used in Subpart OOOO, 40 C.F.R. §60.5430), confirmed that the Facility was subject to the provisions of Subparts KKK and OOOO. Ettore also specifically identified the following process units within the Facility as being subject to NSPS Subparts KKK and OOOO:

- Houston 1 (KKK)
- Houston 2 (KKK)
- Houston 3 (KKK)
- Frac 1 (OOOO)
- Frac 2 (OOOO)
- De-Ethanizer (OOOO)
- Railcar Yard (OOOO)
- De-Propanizer 5 (OOOO)
- Pad 1 and 4 (KKK)
- Pad 2 and 3 (OOOO)

48. At the time of the April 2015 Air Compliance Inspection, several areas of concern or “deviations” (as that term is used in Subpart OOOO, at 40 C.F.R. §60.5430) were found at the Facility which EPA identified as being not in compliance with the Facility’s LDAR monitoring program. Those deviations included:

a) Areas where EPA inspectors observed affected components missing LDAR program tags, and the failure to include those affected components in Respondent’s LDAR program. For example, there were no LDAR tags and all of the components in Storage Pad 3 were not included in the LDAR program. Respondent commenced identifying and tagging this area while the inspection was ongoing. After the inspection, Respondent stated that 281 valves, 660 connectors, and 18 process safety valves that had previously not been included in its LDAR program had now been identified and tagged. There were also missing tags on: the Mariner East propane line; sections in Truck Loading; new components in Houston 1, Frac 2, De-Propanizer 5, and the Railcar Loading Rack, where EPA noticed that several of the loading rack arms were missing LDAR tags and there were numerous leaks where the arms attach directly to the cars. These emissions (VOCs and HAPs) occur during loading of railcars and are not captured and controlled, resulting in them potentially being underreported to PADEP.

b) Open-ended lines were observed in several process units (e.g. Houston 1, Truck Loading, De-Propanizer 5, Frac 1, and Frac 2), which failed to have double a block valve. These process units are subject to either Subpart KKK or OOOO.¹

¹ See Paragraph 47 for the applicability of either NSPS KKK or OOOO to each process unit.

40 C.F.R. § 60.632(a) provides that each owner or operator subject to the provisions of this subpart shall comply with the requirements of §§60.482-1 (a), (b), and (d) and 60.482-2 through 60.482-10, except as provided in §60.633, as soon as practicable, but no later than 180 days after initial startup. 40 C.F.R. § 60.482-6(a)(1) requires Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1(c) and paragraphs (d) and (e) of this section. For affected components subject to Subpart OOOO, 40 C.F.R. § 60.5400(a) requires that owners/operators comply with the requirements of §§60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a, except as provided in §60.5401. This section of Subpart OOOO references back to Subpart VVa which requires in § 60.482-6a(a)(1) that each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §60.482-1a(c) and paragraphs (d) and (e) of this section.

c) Approximately ten (10) insulated valves in several process units in Houston 1 failed to provide adequate access to conduct Method 21 fugitive leak monitoring. Houston 1 is subject to Subpart KKK which references the LDAR requirements in Subpart VV. 40 C.F.R. § 60.485(b)(1) of Subpart VV requires that Method 21 shall be used to determine the presence of leaking sources. Section 8.3.1 of 40 C.F.R. Appendix A Method 21 requires that the monitoring probe inlet shall be placed at the surface of the component interface where leakage could occur. Furthermore, Section 8.3.1.1 of Method 21 that for valves, the probe inlet shall be placed at the interface where the stem exits the packing gland and sample the stem circumference. It is not possible to conduct monitoring according to 8.3.1 and 8.3.1.1 of Method 21 at the 10 valves identified in Houston 1 due to the insulation in place.

d) Valve leak rates obtained through LDAR monitoring by EPA during the April 2015 Compliance Inspection were not consistent with valve leak rates reported by Respondent's third party contractors during its routine leak scans. Respondent's contractor indicated that there are no areas at the Facility that are specifically exempted from LDAR monitoring and that a daily leak sheet is generated after each day of monitoring. Based on the number of valves monitored by EPA's inspectors and the corresponding leak rates observed during the April 2015 Air Compliance Inspection – which were significantly higher—EPA determined that this reflected a failure by the Respondent to implement Method 21 properly at the Facility. Method 21 monitoring is required under Subparts KKK and OOOO by reference through Subparts VV and VVa. 40 C.F.R. §§ 60.485(b)(1) and 60.485a(b)(1) require an owner or operator to utilize Method 21 to determine the presence of leaks.

e) Evidence of several continuously leaking process safety valves that were not being accounted for in emission calculations. EPA identified these areas with the use of FLIR imagery and the TVA1000. These leaking process safety valves were identified to Respondent at the time of the April 2015 Air Compliance Inspection.

VIOLATIONS

49. Failure to Identify Applicable Components subject to Subparts KKK and OOOO in Respondent's LDAR Program:

(a) Based on EPA's inspection and review of records kept by the Respondent at the Facility, Respondent failed to keep records of affected equipment subject to Subpart OOOO, 40 C.F.R. §60.5365(f)(2) (e.g., valves and connectors), along the Mariner East Pipeline (constructed after the August 2011 applicability date for Subpart OOOO). The Mariner East Pipeline is located within the Facility because the pipeline is equipment used for transporting gas from a production plant, gathering system, storage area or other wholesale source of gas to one or more distribution area(s). EPA determined that Respondent failed to monitor affected valves and connectors associated with the Mariner East Pipeline from at least December 2014 through April 2015, in accordance with 40 C.F.R. §§ 60.5365(f)(2) and 60.5400(a), and Subpart VVa §§ 60.482-7a and 60.482-11a. The pipeline carries propane and ethane off-site and then travels east to the PES Refinery in Philadelphia.

(b) Respondent failed to identify, record, and monitor valves and connectors located within the pressurized storage tank area ("Storage Pad 3") of the Facility, in accordance with 40 C.F.R. §§ 60.5365 and 60.5400(a) and Subpart VVa §§ 60.482-7a and 60.482-11a. Pad 3 was constructed or modified after the 2011 applicability date for Subpart OOOO. None of the components within this area were physically tagged or included in Respondent's LDAR program and thus also not monitored from at least July 2012 through April 2015. Respondent began the process of identifying these components during EPA's inspection, and later admitted that 281 valves, 660 connectors, and 18 process safety valves were identified in Storage Pad 3. Respondent stated to EPA that it would henceforth include these components in its LDAR program for Subpart OOOO.

(c) Respondent failed to tag and include several valves located within the truck loading area in its LDAR program and failed to monitor these valves in accordance with Subpart KKK and 40 C.F.R. §60.632(a) and Subpart VV (§ 60.482-7(a)). The truck loading area was not constructed or modified after August 2011. EPA identified these components to Respondent's personnel during the inspection. In an email dated 6/2/2015 from Respondent's Senior Environmental Manager, David Ettore, to Bruce Augustine of EPA, Ettore indicated that Respondent later addressed the concerns identified by EPA during the April 2015 Air Compliance Inspection regarding missed components in the Respondent's LDAR program in the Storage Pad 3 and truck loading areas, as required under Subparts KKK and OOOO.

50. Failure to Double Block Valve Open-Ended Lines:

During the April 2015 Air Compliance Inspection, EPA inspectors observed the following "open-ended lines" (i.e., valves, except safety relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping):

Location	Component ID#	OOOO/KKK
Houston 1	1534	KKK
Truck Loading	6227	KKK
De-Propanizer (Frac 1)	4348	OOOO
De-Propanizer 5	8676	OOOO
De-Propanizer 5	8736	OOOO
Truck Loading	6189	KKK
Truck Loading	6172	KKK
Frac 2	No ID but next to 5575	OOOO

None of these open-ended lines had a cap, blind flange, plug, or a second valve, in violation of Subparts KKK and OOOO, 40 C.F.R. §§60.632(a) and 60.5400(a), and related requirements in Subparts VV and VVa.

51. Failure to Include New Components in LDAR Program.

During the April 2015 Air Compliance Inspection, EPA determined that Respondent had failed to tag and incorporate affected equipment that had been installed at the Facility into its existing LDAR program. Each of the process units identified below were constructed on or after August 23, 2001. EPA inspectors observed the following components that were not tagged:

- 3 valves to the right of Tag 001667 in Houston 1 (Subpart KKK)
- 3 valves above Tag 004353 in Depropanizer 4 (Subpart KKK)
- 3 valves to the west of Tag 006160 in Truck Loading (Subpart KKK)
- 7 valves adjacent to Tag 000194 Houston 1 inlet (Subpart KKK)
- No tags were observed on the closed drain tank (multiple valves) at the Truck Loading area (Subpart KKK)
- New control valve between valves 005775 and 005778 with no tags in Frac 2 (Subpart OOOO)
- New piping between 005779 and 005780 with no tags in Frac 2 (Subpart OOOO).

Respondent failed to log each affected piece of equipment into its LDAR program, and monitor those components as process changes were being made, in violation of 40 C.F.R. §§ 60.482-7a, 60.486a(e)(1) and 60.5400(a) for Subpart OOOO affected components and §§ 60.482-7, 60.486(e)(1) and 60.632(a) for components subject to Subpart KKK.

52. Failure to Operate Pressure Relief Devices with No Detectable Emissions.

During the April 2015 Air Compliance Inspection, EPA inspectors observed several process safety valves that were found to have been leaking with detectable emissions, during the inspection when monitored by EPA with a TVA1000. The leaks were not observed during pressure release scenarios. This is a violation of 40 C.F.R. §60.482-4 for Subpart KKK affected process safety valves, and 40 C.F.R. §60.482-4a for Subpart OOOO affected process safety valves.

53. Failure to Have Access for Monitoring of Values.

During the April 2015 Air Compliance Inspection, EPA inspectors observed ten (10) insulated valves located in Houston 1 and the De-Ethanizier that had no access to adequately monitor for leaks under Method 21, in violation of 40 C.F.R. §60.485(b)(1) and 40 C.F.R. Part 60 Appendix A Method 21 Section 8.3.1.1.

54. Failure to Make 1st Attempt at Repair on Leaking Component within 5 Days of Leak Detection.

During the April 2015 Air Compliance Inspection, Respondent provided EPA with a copy of its LDAR monitoring history for the past several years. This information included all monitoring events at the facility at each process unit. These process units are subject to either Subpart KKK or Subpart OOOO. EPA's review of this information indicated that MarkWest had failed to make a 1st attempt at repair on components subject to Subparts KKK or OOOO on at least 430 occasions, since April of 2011. 40 C.F.R. §§ 60.482-7(d)(2) and 60.482-7a(d)(2) requires Respondent to make a 1st attempt at repair within five (5) days on leaking valves in gas vapor or light liquid service. Furthermore, 40 C.F.R. § 60.482-11a(d) requires Respondent to make a first attempt at repair within 5 days after a leak is detected. Since April 2011, Respondent has violated the above listed provisions of Subparts KKK and OOOO by failing to make a first attempt at repair.

55. Failure to Properly Implement Method 21.

During the April 2015 Air Compliance Inspection, EPA conducted LDAR monitoring, according to Method 21, in the following Subpart KKK affected units and calculated the following leak rates:

<u>Process Unit</u>	<u>EPA Valve Leak Rate</u>
Houston 1	9.1%
Frac 1	10.3%
Storage/Loading	9.1%
Frac 2	8.6%

During the 2nd half of 2014, Respondent reported a leak rate from its LDAR program in Subpart KKK affected units of <1% in each unit. Respondent also reported a leak rate from its LDAR program in Subpart OOOO affected units of <1% in each unit. EPA conducted LDAR monitoring to determine the correct leak rate, using the test methods found in Method 21, 40 C.F.R. Part 60, Appendix A-7, §§8.3.1 and 8.3.1.1², in the following NSPS Subpart OOOO affected units and calculated the following leak rates:

<u>Process Unit</u>	<u>EPA Valve Leak Rate</u>
De-Ethanizer	5.7%
De-Propanizer 5	4.7%
Railcar Loading Station/Rack	14.5%

EPA determined that Respondent failed to perform Method 21 properly on valves, in violation of Subpart OOOO requirements in 40 C.F.R. §§60.5400(a) and 60.482-7a(a)(1), and 40 C.F.R. Part 60 Appendix A-7, Method 21, §§8.3.1 and 8.3.1.1, from at least July 2014 until May 2015, for Subpart OOOO affected components. In addition, Respondent failed to perform Method 21 properly on valves, in violation of Subpart KKK requirements in 40 C.F.R. §§60.632(a) and 60.482-7(a)(1), and 40 C.F.R. Part 60 Appendix A-7, Method 21, §§8.3.1 and 8.3.1.1, from at least July 2014 until May 2015, for Subpart KKK affected components.

56. Failure to Comply with NSPS NNN (*Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations*).

During the April 2015 Air Compliance Inspection, EPA determined that the Facility was subject to Subpart NNN because it is an affected facility under 40 C.F.R. §60.660(b) that is part of a process unit that produces several of the chemicals listed in 40 C.F.R. §60.667 (including propane, n-butane and isobutene) as product, co-product, by-product, or intermediate, at multiple distillation columns located at the Facility (40 C.F.R. §60.660). These columns were constructed after December 30, 1983, and are used to separate different fractions of natural gas into its components. EPA further observed that Respondent has failed to comply with any of the applicable provisions of Subpart NNN, including the notification, reporting, monitoring, testing and recordkeeping provisions contained therein, from October 2008 through the present.

² Method 21 is required by §60.485a(b)(1) to determine leaks for source s subject to NSPS OOOO and §60.485(b)(1) for sources subject to NSPS KKK.

ENFORCEMENT AUTHORITY

57. Section 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3), provides that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement or prohibition of, *inter alia*, any rule promulgated under the NSPS requirements of Section 111 of the CAA, 42 U.S.C. § 7411, Title V of the CAA, 42 U.S.C. §§ 7661-7661f, or any rule or permit issued thereunder, the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

PENALTY ASSESMENT CRITERIA

58. Section 113(e)(1) of the Act, as amended, 42 U.S.C. § 7413(e)(1), states that the court, in an action for assessment of civil or criminal penalties shall as appropriate in determining the amount of penalty to be assessed, take into consideration (in addition to such other factors as justice may require) the size of the business, the economic impact of the penalty on the business, the violator's full compliance history and good faith efforts to comply, the duration of the violation as established by any credible evidence (including evidence other than the applicable test method), payment by the violator of penalties previously assessed for the same violation, the economic benefit of noncompliance, and the seriousness of the violation.

Section 113(e)(2) of the Act, as amended, 42 U.S.C. § 7413(e)(2), allows the court to assess a penalty for each day of the violation. For purposes of determining the number of days of violation, where the plaintiff makes a prima facie showing that the conduct or events giving rise to this violation are likely to have continued or recurred past the date of this notice of noncompliance (or a previously issued air pollution control agency notice of violation for the same violation), the days of the violation shall be presumed to include the date of this notice (or the previous notice of violation) and each and every day thereafter until Respondent establishes that continuous compliance has been achieved, except to the extent that Respondent can prove by the preponderance of the evidence that there were intervening days during which no violation occurred or that the violation was not continuing in nature.

OPPORTUNITY FOR CONFERENCE

59. Respondent may, upon request, confer with EPA to discuss this Notice of Noncompliance and Finding of Violation. If Respondent requests a conference with EPA, Respondent should be prepared to describe the causes of the violation and to describe any actions Respondent may have taken or proposes to take to bring the Facility into compliance. Respondent has the right to be represented by counsel.

Respondent must submit any request for a conference with EPA within fourteen (14) calendar days of receipt of this Notice of Noncompliance and Finding of Violation. A request for a conference with EPA, and/or any inquiries regarding this Notice of Noncompliance and Finding of Violation, should be submitted in writing to:

Bruce Augustine
Senior Enforcement Officer
Air Protection Division (3AP20)
U. S. Environmental Protection Agency - Region III
1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-2131

and

Dennis M. Abraham
Senior Assistant Regional Counsel
Office of Regional Counsel (3RC10)
U. S. Environmental Protection Agency - Region III
1650 Arch Street
Philadelphia, PA 19103-2029
(215) 814-5214

EFFECTIVE DATE

60. This Notice of Noncompliance and Finding of Violation shall be effective immediately upon receipt.

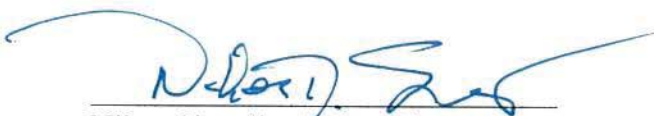
QUESTIONS REGARDING NOTICE OF NONCOMPLIANCE AND FINDING OF VIOLATION

61. In you have any questions regarding the issuance of this Notice of Noncompliance and Finding of Violation, you may contact Bruce Augustine, Senior Enforcement Officer at (215) 814-2131, or Dennis M. Abraham, Senior Assistant Regional Counsel, at (215) 814-5214.

DISCLOSURE INFORMATION

62. Certain companies may be required to disclose to the Securities and Exchange Commission ("SEC") the existence of certain pending or known to be contemplated environmental legal proceedings (administrative or judicial) arising under Federal, State or Local environmental laws. Please see the attached "Notice of Securities and Exchange Commission Registrants' Duty to Disclose Environmental Legal Proceedings" for more information about this requirement and to aid you in determining whether your company may be subject to the same.

EPA is enclosing an Information Sheet entitled "U.S. EPA Small Business Resources," (EPA 300-F-99-004, September 1999), which identifies a variety of compliance assistance and other tools available to assist small businesses in complying with Federal and State environmental laws.



Nikos Singelis, Acting Director
Air Protection Division

Date



U.S. EPA Small Business Resources Information Sheet

The United States Environmental Protection Agency provides an array of resources to help small businesses understand and comply with federal and state environmental laws. In addition to helping small businesses understand their environmental obligations and improve compliance, these resources will also help such businesses find cost-effective ways to comply through pollution prevention techniques and innovative technologies.

Small Business Programs

www.epa.gov/smallbusiness
EPA's Office of Small Business Programs (OSBP) advocates and fosters opportunities for direct and indirect partnerships, contracts, and sub-agreements for small businesses and socio-economically disadvantaged businesses.

EPA's Asbestos Small Business Ombudsman

www.epa.gov/sbo or 1-800-368-5888
The EPA Asbestos and Small Business Ombudsman (ASBO) serves as a conduit for small businesses to access EPA and facilitates communications between the small business community and the Agency.

EPA's Compliance Assistance Homepage

www2.epa.gov/compliance
This page is a gateway industry and statute-specific environmental resources, from extensive web-based information to hotlines and compliance assistance specialists.

EPA's Compliance Assistance Centers

www.assistancecenters.net
EPA's Compliance Assistance Centers provide information targeted to industries with many small businesses. They were developed in partnership with industry, universities and other federal and state agencies.

Agriculture

www.epa.gov/agriculture/

Automotive Recycling

www.ecarcenter.org

Automotive Service and Repair

ccar-greenlink.org/ or 1-888-GRN-LINK

Chemical Manufacturing

www.chemalliance.org

Construction

www.cicacenter.org or 1-734-995-4911

Education

www.campuserc.org

Food Processing

www.fpeac.org

Healthcare

www.hercenter.org

Local Government

www.lgean.org

Metal Finishing

www.nmfrc.org

Paints and Coatings

www.paintcenter.org

Printing

www.pneac.org

Ports

www.portcompliance.org

Transportation

www.tercenter.org

U.S. Border Compliance and Import/Export Issues

www.bordercenter.org

EPA Hotlines, Helplines and Clearinghouses

www2.epa.gov/home/epa-hotlines

EPA sponsors many free hotlines and clearinghouses that provide convenient assistance regarding environmental requirements. Some examples are:

Clean Air Technology Center (CATC) Info-line

www.epa.gov/ttn/catc or 1-919-541-0800

Superfund, TRI, EPCRA, RMP and Oil Information Center

www.epa.gov/superfund/contacts/infocenter/index.htm or 1-800-424-9346

EPA Imported Vehicles and Engines Public Helpline

www.epa.gov/otaq/imports or 734-214-4100

National Pesticide Information Center

www.npic.orst.edu/ or 1-800-858-7378

National Response Center

Hotline to report oil and hazardous substance spills - www.nrc.uscg.mil or 1-800-424-8802

Pollution Prevention Information Clearinghouse (PPIC) -

www.epa.gov/opptintr/ppic or 1-202-566-0799

Safe Drinking Water Hotline -

www.epa.gov/drink/hotline/index.cfm or 1-800-426-4791

Stratospheric Ozone Protection Hotline

www.epa.gov/ozone/comments.htm or 1-800-296-1996

Toxic Substances Control Act (TSCA) Hotline

tsc-hotline@epa.gov or 1-202-554-1404

Small Entity Compliance Guides

<http://www.epa.gov/sbrefa/compliance-guides.html>

EPA publishes a Small Entity Compliance Guide (SECG) for every rule for which the Agency has prepared a final regulatory flexibility analysis, in accordance with Section 604 of the Regulatory Flexibility Act (RFA).

Regional Small Business Liaisons

<http://www.epa.gov/sbo/rsbl.htm>

The U.S. Environmental Protection Agency (EPA) Regional Small Business Liaison (RSBL) is the primary regional contact and often the expert on small business assistance, advocacy, and outreach. The RSBL is the regional voice for the EPA Asbestos and Small Business Ombudsman (ASBO).

State Resource Locators

www.envcap.org/statetools

The Locators provide state-specific contacts, regulations and resources covering the major environmental laws.

State Small Business Environmental Assistance Programs (SBEAPs)

www.epa.gov/sbo/507program.htm

State SBEAPs help small businesses and assistance providers understand environmental requirements and sustainable business practices through workshops, trainings and site visits.

EPA's Tribal Portal

www.epa.gov/tribalportal/

The Portal provides access to information on environmental issues, laws, and resources related to federally recognized tribes.

EPA Compliance Incentives

EPA provides incentives for environmental compliance. By participating in compliance assistance programs or voluntarily disclosing and promptly correcting violations before an enforcement action has been initiated, businesses may be eligible for penalty waivers or reductions. EPA has two such policies that may apply to small businesses:

EPA's Small Business Compliance Policy

www2.epa.gov/enforcement/small-businesses-and-enforcement

This Policy offers small businesses special incentives to come into compliance voluntarily.

EPA's Audit Policy

www2.epa.gov/compliance/epas-audit-policy

The Policy provides incentives to all businesses that voluntarily discover, promptly disclose and expeditiously correct their noncompliance.

Commenting on Federal Enforcement Actions and Compliance Activities

The Small Business Regulatory Enforcement Fairness Act (SBREFA) established a SBREFA Ombudsman and 10 Regional Fairness Boards to receive comments from small businesses about federal agency enforcement actions. If you believe that you fall within the Small Business Administration's definition of a small business (based on your North American Industry Classification System designation, number of employees or annual receipts, as defined at 13 C.F.R. 121.201; in most cases, this means a business with 500 or fewer employees), and wish to comment on federal enforcement and compliance activities, call the SBREFA Ombudsman's toll-free number at 1-888-REG-FAIR (1-888-734-3247).

Every small business that is the subject of an enforcement or compliance action is entitled to comment on the Agency's actions without fear of retaliation. EPA employees are prohibited from using enforcement or any other means of retaliation against any member of the regulated community in response to comments made under SBREFA.

Your Duty to Comply

If you receive compliance assistance or submit a comment to the SBREFA Ombudsman or Regional Fairness Boards, you still have the duty to comply with the law, including providing timely responses to EPA information requests, administrative or civil complaints, other enforcement actions or communications. The assistance information and comment processes do not give you any new rights or defenses in any enforcement action. These processes also do not affect EPA's obligation to protect public health or the environment under any of the environmental statutes it enforces, including the right to take emergency remedial or emergency response actions when appropriate. Those decisions will be based on the facts in each situation. The SBREFA Ombudsman and Fairness Boards do not participate in resolving EPA's enforcement actions. Also, remember that to preserve your rights, you need to comply with all rules governing the enforcement process.

EPA is disseminating this information to you without making a determination that your business or organization is a small business as defined by Section 222 of the Small Business Regulatory Enforcement Fairness Act or related provisions.

NOTICE OF SECURITIES AND EXCHANGE COMMISSION REGISTRANTS' DUTY TO DISCLOSE ENVIRONMENTAL LEGAL PROCEEDINGS

Securities and Exchange Commission regulations require companies registered with the SEC (e.g., publicly traded companies) to disclose, on at least a quarterly basis, the existence of certain administrative or judicial proceedings taken against them arising under Federal, State or local provisions that have the primary purpose of protecting the environment. Instruction 5 to Item 103 of the SEC's Regulation S-K (17 CFR 229.103) requires disclosure of these environmental legal proceedings. For those SEC registrants that use the SEC's "small business issuer" reporting system, Instructions 1-4 to Item 103 of the SEC's Regulation S-B (17 CFR 228.103) requires disclosure of these environmental legal proceedings.

If you are an SEC registrant, you have a duty to disclose the existence of pending or known to be contemplated environmental legal proceedings that meet any of the following criteria (17 CFR 229.103(5)(A)-(C)):

- A. Such proceeding is material to the business or financial condition of the registrant;
- B. Such proceeding involves primarily a claim for damages, or involves potential monetary sanctions, capital expenditures, deferred charges or charges to income and the amount involved, exclusive of interest and costs, exceeds 10 percent of the current assets of the registrant and its subsidiaries on a consolidated basis; or
- C. A governmental authority is a party to such proceeding and such proceeding involves potential monetary sanctions, unless the registrant reasonably believes that such proceeding will result in no monetary sanctions, or in monetary sanctions, exclusive of interest and costs, of less than \$100,000; provided, however, that such proceedings which are similar in nature may be grouped and described generically.

Specific information regarding the environmental legal proceedings that must be disclosed is set forth in Item 103 of Regulation S-K or, for registrants using the "small business issuer" reporting system, Item 103(a)-(b) of Regulation S-B. If disclosure is required, it must briefly describe the proceeding, "including the name of the court or agency in which the proceedings are pending, the date instituted, the principal parties thereto, a description of the factual basis alleged to underlie the proceedings and the relief sought."

You have been identified as a party to an environmental legal proceeding to which the United States government is, or was, a party. If you are an SEC registrant, this environmental legal proceeding may trigger, or may already have triggered, the disclosure obligation under the SEC regulations described above.

This notice is being provided to inform you of SEC registrants' duty to disclose any relevant environmental legal proceedings to the SEC. This notice does not create, modify or interpret any existing legal obligations, it is not intended to be an exhaustive description of the legally applicable requirements and it is not a substitute for regulations published in the Code of Federal Regulations. This notice has been issued to you for information purposes only. No determination of the applicability of this reporting requirement to your company has been made by any governmental entity. You should seek competent counsel in determining the applicability of these and other SEC requirements to the environmental legal proceeding at issue, as well as any other proceedings known to be contemplated by governmental authorities.

If you have any questions about the SEC's environmental disclosure requirements, please contact the SEC Office of the Special Senior Counsel for Disclosure Operations at (202) 551-3115.

APPENDIX G



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JUN 21 2016

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, L.L.C.
MarkWest Ohio Fractionation Company, L.L.C.
43050 Industrial Park Road
Cadiz, Ohio 43907

Re: Finding of Violation
MarkWest Energy Partners L.P.
MarkWest Utica EMG, L.L.C., and
MarkWest Ohio Fractionation Company, L.L.C. Jewett, Ohio

Dear Ms. McBurney:

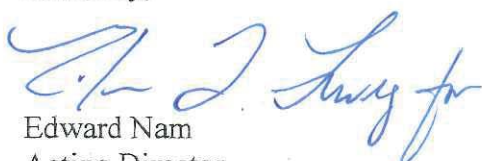
The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to MarkWest Energy Partners L.P., MarkWest Utica EMG, L.L.C., and MarkWest Ohio Fractionation Company, L.L.C. (collectively MarkWest or you). We find that you are violating the following at your Hopedale Fractionation Plant in Jewett, Ohio: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a - 60.490 (Subpart VVa); and the New Source Performance Standards General Provisions under 40 C.F.R. Part 60, Subpart A.

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference. The EPA contact in this matter is Constantinos Loukeris. You may call him at (312) 353-6198 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

A handwritten signature in blue ink, appearing to read "E. Nam", is written over the typed name.

Edward Nam
Acting Director
Air and Radiation Division

Enclosure

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:

**MarkWest Energy Partners, L.P.,
MarkWest Utica EMG, L.L.C., and
MarkWest Ohio Fractionation Co., L.L.C.
Jewett, Ohio**

Proceedings Pursuant to
the Clean Air Act,
42 U.S.C. §§ 7401 et seq.

FINDING OF VIOLATION

EPA-5-16-OH-09

FINDING OF VIOLATION

The U.S. Environmental Protection Agency finds that MarkWest Energy Partners, L.P., MarkWest Utica EMG, L.L.C., and MarkWest Ohio Fractionation Company, L.L.C. (collectively "MarkWest") are violating the Clean Air Act (CAA) and its implementing regulations at the company's Hopedale Fractionation Facility in Jewett, Ohio. Specifically, MarkWest is violating: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a -60.490 (Subpart VVa); and the New Source Performance Standards (NSPS) General Provisions under 40 C.F.R. Part 60, Subpart A (Subpart A).

Regulatory Authority

NSPS Subpart OOOO

1. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate NSPS regulations for certain source categories.
2. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.
3. EPA promulgated Subpart OOOO on September 23, 2013. 78 Fed. Reg. 58435.
4. Subpart OOOO at 40 C.F.R. § 60.5365 states that an owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which construction, modification, or reconstruction commenced after August 23, 2011 is subject

to the applicable provisions of Subpart OOOO. Section 60.5365(f) states that the group of all equipment, except compressors, within a process unit is an affected facility. Section 60.5365(f)(3) further provides that the equipment within a process unit of an affected facility located at onshore natural gas process plants and described in paragraph (f) of this section are exempt from Subpart OOOO if they are subject to and controlled according to Subparts VVa, GGG, or GGGa of 40 C.F.R. Part 60.

5. Subpart OOOO at 40 C.F.R. § 60.5430 defines “process unit” to mean components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.
6. Subpart OOOO at 40 C.F.R. § 60.5430 defines a “natural gas processing plant (gas plant)” as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.”
7. Subpart OOOO at 40 C.F.R. § 60.5400 sets forth equipment standards that apply to affected facilities at an onshore natural gas processing plant. This section applies to the group of all equipment, except compressors, within a process unit.
8. Subpart OOOO at 40 C.F.R. § 60.5400(a) states a subject owner or operator must comply with the equipment leak standard requirements of specific portions of Subpart VVa at 40 C.F.R. §§ 60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a., except as provided in § 60.5401.
9. Subpart OOOO at 40 C.F.R. § 60.5400(d) states that a subject owner or operator must comply with the provisions of § 60.485a of Subpart VVa except as provided in § 60.5400(f).
10. Subpart OOOO at 40 C.F.R. § 60.5400(e) states that a subject owner or operator must comply with the provisions of 40 C.F.R. §§ 60.486a and 60.487a of Subpart VVa except as provided in 40 C.F.R. §§ 60.5401, 60.5421, and 60.5422 of Subpart OOOO.
11. Subpart OOOO at 40 C.F.R. § 60.5400(f) states that a subject owner or operator must use the following provision instead of 40 C.F.R. § 60.485a(d)(1): “Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service.”
12. Subpart OOOO at 40 C.F.R. § 60.5430 defines “flare” to mean a thermal oxidation system using an open (without enclosure) flame.
13. Subpart OOOO at 40 C.F.R. § 60.5425 and Table 3 of Subpart OOOO provides that certain requirements under the General Provisions of NSPS Subpart A apply to owners and operators subject to Subpart OOOO, including the performance test requirements under 40 C.F.R. § 60.8.

NSPS Subpart VVa

14. EPA promulgated NSPS Subpart VVa on November 16, 2007. See 72 Fed. Reg. 64883. (Subpart VVa)
15. Subpart VVa at 40 C.F.R. § 60.482-1a(a) states “[e]ach owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§ 60.482-1a through 60.482-10a or § 60.480a(e) for all equipment within 180 days of initial startup.”
16. Subpart VVa at 40 C.F.R. § 60.482-4a establishes emission control requirements for pressure relief devices in gas/vapor services. As an option for compliance with 40 C.F.R. § 60.482-4a, 40 C.F.R. § 60.482-4a(c) provides that owners or operators shall equip subject pressure relief devices with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 C.F.R. § 60.482-10a.
17. Subpart VVa at 40 C.F.R. § 60.482-10a(a) states that owners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.
18. Subpart VVa at 40 C.F.R. § 60.482-10a(c) states that each enclosed combustion devices shall be designed and operated to reduce the VOC emissions vented to them with an efficiency of 95 percent or greater, or to an exit concentration of 20 ppmv, on a dry basis, corrected to 3 percent oxygen, whichever is less stringent or to provide a minimum residence time of 0.75 seconds at a minimum temperature of 816 °C.
19. Subpart VVa at 40 C.F.R. § 60.482-10a(e) provides that owners or operators of control devices used to comply with the provisions of this subpart shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.
20. Subpart VVa at 40 C.F.R. § 60.482-10a(m) provides that closed vent systems and control devices used to comply with the provisions of this subpart shall be operated at all times when emissions may be vented to them.

NSPS Subpart A

21. Subpart A at 40 C.F.R. § 60.1(a) provides that, except as provided in Subparts B and C, the provisions of this part apply to the owner or operator of any stationary source which contains an affected facility, the construction or modification of which is commenced after the date of publication in this part of any standard (or, if earlier, the date of publication of any proposed standard) applicable to that facility.
22. Subpart A at 40 C.F.R. § 60.8(a) provides that, except as specified in paragraphs (a)(1), (a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the

maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, or at such other times specified by this part, and at such other times as may be required by the Administrator under Section 114 of the CAA, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

Findings of Fact

23. MarkWest owns and operates an onshore natural gas processing plant, at 6155 E. US Route 6, Jewett, Ohio, called the Hopedale Fractionating Plant (HFP), which removes natural gas liquids from field gas and fractionates the natural gas liquids.
24. MarkWest also operates a railcar loading operation at the railcar area of the HFP that is used to distribute natural gas liquids (i.e. propane, butane, and natural gasoline) to customers.
25. On December 12, 2013, MarkWest notified Ohio Environmental Protection Agency that the HFP is subject to Subpart OOOO (and by reference Subpart VVa and Subpart A).
26. To control VOC emissions from pressure relief devices at the railcar loading operation, MarkWest operates an enclosed combustion device located at the facility's railcar area. The railcar enclosed combustion device is subject to the Subpart VVa requirement for control devices at 40 C.F.R. § 60.482-10a.
27. EPA conducted an inspection of the HFP on May 26-28, 2015 (May 2015 inspection).
28. During the May 2015 inspection, EPA requested information regarding combustion control temperature data and manufacturer design specifications for the enclosed combustion device located at the site's railcar area.
29. On October 21, 2015 (October 2015 response), MarkWest submitted a response that included daily temperature readings, including daily temperature minimum, average, and maximum for the period of February 15, 2014 through June 15, 2015.
30. In the October 2015 response, MarkWest provided the manufacturer's performance data sheet for the enclosed combustion device that indicated a total hydrocarbon destruction efficiency of 98 percent when operated at a 1,650°F combustion control temperature.
31. On March 29, 2016, EPA issued a Section 114 information requesting additional information regarding enclosed combustion device located at the railcar loading operations.
32. On May 3 2016, MarkWest submitted a response that included daily temperature readings, including daily temperature minimum, average, and maximum for the period of July 2, 2015 through April 1, 2016.

33. Based on the review of the October 2015 and May 3, 2016 responses, MarkWest did not operate the railcar enclosed combustion device above 816°C (1500.8°F) for 669 days for the period of February 15, 2014 through April 1, 2016. *See* Attachment 1.
34. Based on May 3, 2016 response to the March 2016 information request, MarkWest has not conducted a performance test for the railcar enclosed combustion device.

Violations

35. MarkWest failed to operate the enclosed combustion device located in the railcar area with a minimum temperature of 816°C and a residence time of 0.75 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-10a(c). *See* Attachment 1.
36. MarkWest failed to conduct a performance test of the enclosed combustion device located in the railcar area to demonstrate compliance with 40 C.F.R. § 60.482-10a(c) in violation of 40 C.F.R. § 60.8(a).
37. By not appropriately monitoring to ensure the enclosed combustion device located in the railcar area met the standards set forth in 40 C.F.R. § 60.482-10a(c), MarkWest failed to monitor the enclosed combustion device to ensure that it is operated and maintained in conformance with its design, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-10a(e).

Enforcement Authority

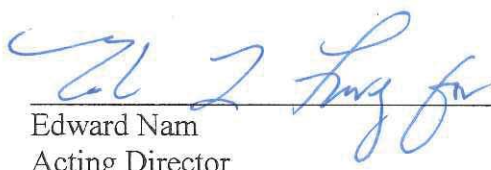
38. Sections 113(a) (3) of the CAA, 42 U.S.C. § 7413(a) (3), provide that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement or prohibition of, *inter alia*, any rule promulgated under the NSPS of Section 111(e) of the CAA, 42 U.S.C. § 7411(e), the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

Environmental Impact of Violations

39. MarkWest's above-referenced violations have caused excess emissions of VOC.
40. Excess VOC emissions can cause eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to the liver, kidney, and central nervous system. Some organics can cause cancer in animals and some are suspected or known to cause cancer in humans.

41. VOC emissions are a precursor to ground-level ozone. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.

6/21/16
Date


Edward Nam
Acting Director
Air and Radiation Division

Attachment 1

2/15/2014	4/7/2014	6/18/2014	7/30/2014	9/19/2014	11/4/2014	12/17/2014	1/27/2015
2/17/2014	4/12/2014	6/19/2014	7/31/2014	9/20/2014	11/5/2014	12/18/2014	1/28/2015
2/18/2014	4/13/2014	6/20/2014	8/1/2014	9/21/2014	11/6/2014	12/19/2014	1/29/2015
2/20/2014	4/15/2014	6/21/2014	8/3/2014	9/23/2014	11/7/2014	12/20/2014	1/30/2015
2/21/2014	4/16/2014	6/22/2014	8/4/2014	9/24/2014	11/8/2014	12/21/2014	1/31/2015
2/25/2014	4/17/2014	6/23/2014	8/5/2014	9/26/2014	11/9/2014	12/22/2014	2/1/2015
2/26/2014	4/18/2014	6/24/2014	8/6/2014	9/27/2014	11/10/2014	12/23/2014	2/2/2015
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3/14/2014	5/12/2014	7/8/2014	8/24/2014	10/13/2014	11/24/2014	1/6/2015	2/17/2015
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3/22/2014	5/17/2014	7/13/2014	9/2/2014	10/20/2014	11/30/2014	1/12/2015	2/22/2015
3/23/2014	5/18/2014	7/14/2014	9/3/2014	10/21/2014	12/1/2014	1/13/2015	2/23/2015
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3/28/2014	6/1/2014	7/22/2014	9/12/2014	10/29/2014	12/11/2014	1/21/2015	3/3/2015
3/29/2014	6/2/2014	7/25/2014	9/13/2014	10/30/2014	12/12/2014	1/22/2015	3/4/2015
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4/1/2014	6/14/2014	7/28/2014	9/16/2014	11/2/2014	12/15/2014	1/25/2015	3/7/2015
4/6/2014	6/15/2014	7/29/2014	9/17/2014	11/3/2014	12/16/2014	1/26/2015	3/8/2015

Attachment 1 (cont')

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3/11/2015	4/23/2015	6/3/2015	8/1/2015	9/14/2015	10/25/2015	12/9/2015	1/25/2016	3/6/2016
3/12/2015	4/24/2015	6/5/2015	8/2/2015	9/15/2015	10/26/2015	12/11/2015	1/26/2016	3/7/2016
3/13/2015	4/25/2015	6/7/2015	8/3/2015	9/16/2015	10/27/2015	12/12/2015	1/27/2016	3/8/2016
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3/18/2015	4/29/2015	6/10/2015	8/7/2015	9/19/2015	10/30/2015	12/15/2015	1/30/2016	3/11/2016
3/19/2015	4/30/2015	6/11/2015	8/8/2015	9/20/2015	10/31/2015	12/16/2015	1/31/2016	3/12/2016
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4/2/2015	5/13/2015	7/10/2015	8/23/2015	10/3/2015	11/15/2015	12/30/2015	2/13/2016	3/25/2016
4/3/2015	5/14/2015	7/11/2015	8/24/2015	10/4/2015	11/16/2015	1/2/2016	2/14/2016	3/26/2016
4/4/2015	5/15/2015	7/12/2015	8/25/2015	10/5/2015	11/17/2015	1/3/2016	2/15/2016	3/27/2016
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4/10/2015	5/21/2015	7/18/2015	9/1/2015	10/11/2015	11/24/2015	1/11/2016	2/21/2016	
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4/18/2015	5/29/2015	7/27/2015	9/9/2015	10/19/2015	12/4/2015	1/20/2016	3/1/2016	
4/19/2015	5/30/2015	7/28/2015	9/10/2015	10/20/2015	12/5/2015	1/21/2016	3/2/2016	
4/20/2015	5/31/2015	7/29/2015	9/11/2015	10/21/2015	12/6/2015	1/22/2016	3/3/2016	

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Finding of Violation, No. EPA-5-16-OH-09, by Certified Mail, Return Receipt Requested, to:

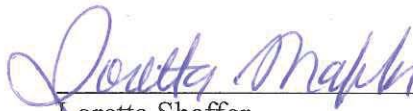
Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, L.L.C.
MarkWest Ohio Fractionation Company, L.L.C.
43050 Industrial Park Road
Cadiz, Ohio 43907

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43266-1049

Melisa Witherspoon
APC Manager, Southeast District Office
Ohio Environmental Protection Agency
2195 Front Street
Logan, Ohio 43138

On the 23 day of June 2016.



Loretta Shaffer
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7011 1150 0000 2640 8329

APPENDIX H



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

SEP 07 2016

REPLY TO THE ATTENTION OF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, L.L.C.
43050 Industrial Park Road
Cadiz, Ohio 43907

Re: Finding of Violation
MarkWest Energy Partners L.P. and
MarkWest Utica EMG, L.L.C.
Summerfield, Ohio

Dear Ms. McBurney:

The U.S. Environmental Protection Agency is issuing the enclosed Finding of Violation (FOV) to MarkWest Energy Partners L.P. and MarkWest Utica EMG, L.L.C. (collectively MarkWest or you) under Sections 113(a)(3) of the Clean Air Act, 42 U.S.C. § 7413(a)(3). We find that you are violating the following at your Seneca Gas Plant in Summerfield, Ohio: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); and (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a - 60.490 (Subpart VVa).

Section 113 of the Clean Air Act gives us several enforcement options. These options include issuing an administrative compliance order, issuing an administrative penalty order, and bringing a judicial civil or criminal action.

We are offering you an opportunity to confer with us about the violations alleged in the FOV. The conference will give you an opportunity to present information on the specific findings of violation, any efforts you have taken to comply, and the steps you will take to prevent future violations. In addition, in order to make the conference more productive, we encourage you to submit to us information responsive to the FOV prior to the conference date.

Please plan for your facility's technical and management personnel to attend the conference to discuss compliance measures and commitments. You may have an attorney represent you at this conference. The EPA contact in this matter is Constantinos Loukeris. You may call him at (312) 353-6198 to request a conference. You should make the request within 10 calendar days following receipt of this letter. We should hold any conference within 30 calendar days following receipt of this letter.

Sincerely,

A handwritten signature in cursive script that reads "Sara Brunema". The signature is written in dark ink and has a fluid, connected style.

Edward Nam
Acting Director
Air and Radiation Division

Enclosure

IN THE MATTER OF:

FINDING OF VIOLATION

EPA-5-16-OH-16

The U.S. Environmental Protection Agency finds that MarkWest Energy Partners, L.P. and MarkWest Utica EMG, L.L.C. (collectively “MarkWest”) is violating the Clean Air Act (CAA) and its implementing regulations at the company’s Seneca Facility in Summerfield, Ohio. Specifically, MarkWest is violating: (1) Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution at 40 C.F.R. §§ 60.5360-5430 (Subpart OOOO); and (2) Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 at 40 C.F.R. §§ 60.480a-60.490 (Subpart VVa).

New Source Performance Standard Subpart 0000

1. Section 111 of the CAA, 42 U.S.C. § 7411, authorizes EPA to promulgate regulations establishing New Source Performance Standards (NSPS).
2. Section 111(e) of the CAA, 42 U.S.C. § 7411(e), states that after the effective date of standards of performance promulgated under this section, it shall be unlawful for any owner or operator of any new source to operate such source in violation of any standard of performance applicable to such source.
3. EPA promulgated Subpart OOOO on September 23, 2013. 78 Fed. Reg. 58435.
4. Subpart OOOO at 40 C.F.R. § 60.5365 states that an owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which construction, modification, or reconstruction commenced after August 23, 2011 is subject to the applicable provisions of Subpart OOOO. Section 60.5365(f) states that the group of all equipment, except compressors, within a process unit is an affected facility. Section 60.5365(f)(3) further provides that the equipment within a process unit of an affected facility located at onshore natural gas process plants and described in paragraph

(f) of this section are exempt from Subpart OOOO if they are subject to and controlled according to Subparts VVa, GGG, or GGGa of 40 C.F.R. Part 60.

5. Subpart OOOO at 40 C.F.R. § 60.5430 defines “process unit” to mean “components assembled for the extraction of natural gas liquids from field gas, the fractionation of the liquids into natural gas products, or other operations associated with the processing of natural gas products.”
6. Subpart OOOO at 40 C.F.R. § 60.5430 defines a “natural gas processing plant (gas plant)” as “any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both.”
7. Subpart OOOO at 40 C.F.R. § 60.5400 sets forth equipment standards that apply to affected facilities at an onshore natural gas processing plant. This section applies to the group of all equipment, except compressors, within a process unit.
8. Subpart OOOO at 40 C.F.R. § 60.5400(a) states a subject owner or operator must comply with the equipment leak standard requirements of specific portions of Subpart VVa at 40 C.F.R. §§ 60.482-1a(a), (b), and (d), 60.482-2a, and 60.482-4a through 60.482-11a., except as provided in § 60.5401.
9. Subpart OOOO at 40 C.F.R. § 60.5400(d) states that a subject owner or operator must comply with the provisions of 40 C.F.R. § 60.485a of Subpart VVa except as provided in § 60.5400(f).
10. Subpart OOOO at 40 C.F.R. § 60.5400(e) states that a subject owner or operator must comply with the provisions of §§ 60.486a and 60.487a of Subpart VVa except as provided in §§ 60.5401, 60.5421, and 60.5422 of Subpart OOOO.
11. Subpart OOOO at 40 C.F.R. § 60.5400(f) states that a subject owner or operator must use the following provision instead of 40 C.F.R. § 60.485a(d)(1): “Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service.”
12. Subpart OOOO at 40 C.F.R. § 60.5401(b) states that each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after each pressure release to detect leaks by the methods specified in 40 C.F.R. § 60.485a(b) except as provided in 40 C.F.R. § 60.5400(c) and in paragraph (b)(4) of this section, and 40 C.F.R. § 60.482-4a(a) through (c) of subpart VVa.
13. Subpart OOOO at 40 C.F.R. § 60.5401(b) further provides that if an instrument reading of 500 ppm or greater is measured, a leak is detected, and when a leak is detected, it must be repaired as soon as practicable, but not later than 15 days after it is detected, except as provided in § 60.482-9a. In addition, § 60.5401(b) provides that a first attempt at repair must be made no later than 5 calendar days after each leak is detected. Section 60.5401(b)(4)(i) provides that any pressure relief device that is located in a

nonfractionating plant that is monitored only by non-plant personnel may be monitored after a pressure release the next time the monitoring personnel are on-site, instead of within 5 days as specified in paragraph (b)(1) of this section and § 60.482-4a(b)(1) of Subpart VVa; however, no pressure relief device described in paragraph (b)(4)(i) of this section must be allowed to operate for more than 30 days after a pressure release without monitoring.

NSPS Subpart VVa

14. EPA promulgated NSPS Subpart VVa on November 16, 2007 (Subpart VVa). See 72 Fed. Reg. 64883.
15. Subpart VVa at 40 C.F.R. § 60.482-1a(a) states “[e]ach owner or operator subject to the provisions of this subpart shall demonstrate compliance with the requirements of §§ 60.482-1a through 60.482-10a or § 60.480a(e) for all equipment within 180 days of initial startup.”
16. Subpart VVa at 40 C.F.R. § 60.482-1a(b) states “[c]ompliance with §§ 60.482-1a to 60.482-10a will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures specified in § 60.485a.”
17. Subpart VVa at 40 C.F.R. § 60.482-2a(a)(1) states “[e]ach pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b), except as provided in § 60.482-1a(c) and (f) and paragraphs (d), (e), and (f) of this section. A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period.”
18. Subpart VVa at 40 C.F.R. § 60.482-2a(a)(2) states that “[e]ach pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in § 60.482-1a(f).”
19. Subpart VVa at 40 C.F.R. § 60.482-11a(a) states “[t]he owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup.”
20. Subpart VVa at 40 C.F.R. § 60.482-11a(d) states that “[w]hen a leak is detected pursuant to paragraphs (a) and (b) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in § 60.482-9a. A first attempt at repair as defined in this subpart shall be made no later than 5 calendar days after the leak is detected” from a connector.
21. Subpart VVa at 40 C.F.R. § 60.482-7a(d)(2) states that “[a] first attempt at repair shall be made no later than 5 calendar days after each leak is detected” from a valve.

22. Subpart VVa at 40 C.F.R. § 60.482-6a(a)(1) states that “[e]ach open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in § 60.482-1a(c) and paragraphs (d) and (e) of this section.”
23. Subpart VVa at 40 C.F.R. § 60.482-6a(a)(2) states that “[t]he cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.”
24. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(1) states that “[e]ach valve shall be monitored monthly to detect leaks by the methods specified in § 60.485a(b) and shall comply with paragraphs (b) through (e) of this section.”
25. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(2) states that “[a] valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to paragraphs (a)(2)(i) or (ii).”
26. Subpart VVa at 40 C.F.R. § 60.482-7a(a)(2)(i) states that a facility must “[m]onitor the valve as in paragraph (a)(1) of this section. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.”
27. Subpart VVa at 40 C.F.R. § 60.485a(b) states “[t]he owner or operator shall determine compliance with the standards in §§ 60.482-1a through 60.482-11a, 60.483a, and 60.484a as follows: (1) Method 21 shall be used to determine the presence of leaking sources. The instrument shall be calibrated before use each day of its use by the procedures specified in Method 21 of Appendix A-7 of this part.”
28. Subpart VVa at 40 C.F.R. § 60.482-4a(a) states that “[e]xcept during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in § 60.485a(c).”
29. Subpart VVa at 40 C.F.R. § 60.482-4a(b) states that “[a]fter each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in § 60.482-9a.” Further, 40 C.F.R. § 60.482-4a(b) provides that “[n]o later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, by the methods specified in § 60.485a(c).”
30. Subpart VVa at 40 C.F.R. § 60.482-4a(c) provides that “[a]ny pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage through the pressure relief device to a control device as described in 40 C.F.R. § 60.482-10a is exempted from the requirements of paragraphs (a) and (b) of [§ 60.482-4a].”

31. Subpart VVa at 40 C.F.R. § 60.482-10a(a) states that “[o]wners or operators of closed vent systems and control devices used to comply with provisions of this subpart shall comply with the provisions of this section.” § 60.482-10a(m) provides that “[c]losed vent systems and control devices used to comply with this subpart shall be operated at all times when emissions may be vented to them.”
32. The NSPS Appendix A-7, at 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1, sets forth the technique which must be used to determine if there is a leak from a valve.

Findings of Fact

33. MarkWest owns and operates an onshore natural gas processing plant, at 26645 Zep Road East, Summerfield, Ohio, called the Seneca Gas Plant (SGP), which removes natural gas liquids from field gas.
34. On November 4, 2013, MarkWest notified Ohio EPA that the SGP is subject to Subpart OOOO (and by reference Subpart VVa).
35. EPA conducted an inspection of the SGP on April 25-28, 2016 (April 2016 inspection).
36. During the April 2016 inspection, EPA reviewed records indicating that MarkWest did not calibrate their portable volatile organic compound (VOC) monitor with the appropriate calibration gas prior to performing Method 21 monitoring of pumps for the following months:
 - a. October 2014;
 - b. November 2014;
 - c. December 2014;
 - d. January 2015;
 - e. February 2015;
 - f. March 2015; and
 - g. September 2015.
37. During the April 2016 inspection, EPA observed greater than 10,000 parts per million (ppm) of VOC from an open-ended valve or line not properly connected into a dew point analyzer in the Seneca 3 process unit. In addition, EPA imaged significant hydrocarbons from this sample line using a FLIR® infrared camera.
38. During the April 2016 inspection, EPA observed the following valves that were insulated such that Method 21 could not be performed at the surface of the valve where leakage could occur: Tag# 179EE in Inlet; Tag# 909, 910, 925, 924, 939, 1013, 1009, and 868 in Seneca 1; Tag# 2157, 1620, 1618 in Seneca 2; and Tag# 2850, 2755, and 2756 in Seneca 3.
39. During the April 2016 inspection, EPA reviewed records indicating MarkWest did complete a weekly visual inspection for four pumps for three weeks in August 2015.

40. During the April 2016 inspection, EPA observed pressure relief devices that are routed through a vent system to a flare.
41. On May 19, 2016 (May 2016 Letter), MarkWest submitted follow-up information requested during the April 2016 inspection.
42. In the May 2016 Letter, MarkWest indicated that they were unable to retrieve any records of weekly visual pump inspections for February 2014.
43. During the April 2016 inspection, EPA observed three open-ended valves or lines, with Tag# 758, 759, and 1038 that did not have sealed closure devices.
44. From MarkWest's leak detection and repair (LDAR) database provided during the April 2016 inspection, EPA identified the following number of connectors that were not monitored initially within 12 months:

Process Unit	Number of Connectors	Start-Up of Process Unit	Initial Monitoring Date
Flare	84	October 2013	January 2016
Inlet	1,135	October 2013	June 2015
Seneca 1	1,580	October 2013	June 2015
Seneca 1	113	October 2013	August 2015
Seneca 1	166	October 2013	February 2016
Seneca 2	11	February 2014	June 2015
Seneca 2	120	February 2014	August 2015
Seneca 2	432	February 2014	February 2016
Seneca 3	105	July 2014	October 2015

45. From MarkWest's LDAR database provided during the April 2016 inspection, EPA identified the following number of valves that were not monitored initially within 30 days:

Process Unit	Number of Valves	Start-Up of Process Unit	Initial Monitoring Date
Flare	27	October 2013	March 2014
Flare	2	October 2013	August 2015
Inlet	441	October 2013	March 2014
Inlet	204	October 2013	June 2015
Seneca 1	842	October 2013	March 2014
Seneca 1	124	October 2013	June 2015
Seneca 1	62	October 2013	August 2015
Seneca 2	782	February 2014	November 2014
Seneca 2	43	February 2014	June 2015
Seneca 2	97	February 2014	July 2015
Seneca 3	893	July 2014	February 2015
Seneca 3	56	July 2014	June 2015
Seneca 3	60	July 2014	October 2015

46. From MarkWest's LDAR database provided during the April 2016 inspection, EPA identified the follow pressure relief valves that leaked above 500 ppm:

Process Unit	Tag Number	Date	Concentration (ppm)
Inlet	00019	July 27, 2015	6,264
Seneca 1	01183	April 18, 2015	954
Seneca 2	02031	December 11, 2014	16,393
Seneca 4	03711	August 27, 2015	1,291
Seneca 4	03804	January 21, 2016	144,695

47. In reviewing MarkWest's leak history, EPA discovered the following leaks that did not have a first attempt at repair within 5 days:

Tag #	Date	Component Type
03446	July 9, 2015	Valve
01212	July 31, 2015	Connector
02090	June 18, 2015	Connector

48. For the monthly and quarterly monitoring events since March 2014, MarkWest reported an average of 2.39 as the percentage of valves leaking in the Seneca 1, Seneca 2, and Seneca 3 process units, whereas EPA found a 4.66% leaking rate during the April 2016 inspection.
49. MarkWest operates pilot designed pressure relief devices throughout the SGP. These pilot pressure relief devices are designed to release gas directly to the atmosphere from the pilot vents with any overpressure greater than 1 percent and up to 15 percent prior to actuating the main pressure-relief valve to the flare.
50. During the April 2016 inspection, EPA identified a pilot designed pressure relief device (Tag # 00689) at the Seneca 1 process unit venting to the atmosphere instead of the flare header using a portable VOC instrument (1,900 ppm), and confirmed by MarkWest tagging the pressure relief device as leaking.

Violations

51. MarkWest failed to perform Method 21 properly on 14 insulated valves listed in paragraph 38, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(a)(1) (and by reference § 60.485(b)) and 40 C.F.R. Part 60, Method 21 §§ 8.3.1 and 8.3.1.1.
52. MarkWest failed to perform initial monthly monitoring of all valves, including bleeder valves from 5-way assemblies, listed in paragraph 45 within 30 days for each process unit at the SGP after the initial startup date, in violation of 40 C.F.R. §§ 60.5400(a), 60.482-7a(a)(2), and 60.482-7a(a)(1).
53. MarkWest failed to perform the initial monthly monitoring of all pumps in each process unit at the SGP within 30 days after the end of the startup period, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-2a(a)(1).
54. MarkWest failed to perform annual monitoring on all connectors identified paragraph 44, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-11a(a).

55. MarkWest failed to seal each closure device associated with an open-ended valve or line per paragraph 43 with a cap, blind flange, plug, or a second valve, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-6a(a)(2).
56. MarkWest failed to perform weekly visual inspections on pumps in each of the process units at the SGP for the period of October 2013 through February 2014, and for 4 pumps over 3 weeks in August 2015, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482a(a)(2).
57. MarkWest failed to make timely first attempts at repairs within 5 days on the valve listed in paragraph 47 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(d)(2).
58. MarkWest failed to make timely first attempts at repairs within 5 days on the connectors listed in paragraph 47 in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-11a(d).
59. Based on pressure relief device design information and VOC monitoring conducted during the April 2016 inspection and per paragraph 46, MarkWest has failed to comply with closed vent and control device requirements for pressure relief devices at the SGP, in violation of 40 C.F.R. §§ 60.5400(a), § 60.482-4a(c), § 60.482-10a(a).
60. For the open-ended valve or line venting to the atmosphere per paragraph 37, MarkWest has failed to place a cap, a blind flange, a plug, or a second valve at the open-ended valve or line, in violation of 40 C.F.R. §§ 60.5400(a) and § 60.482-6a(a)(1).
61. MarkWest failed to perform Method 21 properly on valves per paragraph 48, in violation of 40 C.F.R. §§ 60.5400(a) and 60.482-7a(a)(1), and 40 C.F.R. Part 60 Method 21, §§ 8.3.1 and 8.3.1.1, from at least March 2014 through March 2016.

Enforcement Authority

62. Sections 113(a)(3) of the CAA, 42 U.S.C. § 7413(a)(3), provide that whenever, on the basis of any information available to the Administrator, the Administrator finds that any person has violated, or is in violation of, any requirement or prohibition of, *inter alia*, an applicable SIP or permit, any rule promulgated under the NSPS requirements of Section 111(e) of the CAA, 42 U.S.C. § 7411(e), Title V of the CAA, 42 U.S.C. §§ 7661-7661f, or any rule or permit issued thereunder, the Administrator may issue an administrative penalty order under Section 113(d), issue an order requiring compliance with such requirement or prohibition, or bring a civil action pursuant to Section 113(b) for injunctive relief and/or civil penalties.

Environmental Impact of Violations

63. MarkWest's above-referenced violations have caused excess emissions of VOC.
64. Excess VOC emissions can cause eye, nose, and throat irritation; headaches, loss of coordination, nausea; damage to the liver, kidney, and central nervous system. Some organics can cause cancer in animals and some are suspected or known to cause cancer in humans.

65. VOC emissions are a precursor to ground-level ozone. Breathing ozone contributes to a variety of health problems including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level ozone also can reduce lung function and inflame lung tissue. Repeated exposure may permanently scar lung tissue.

9-8-16
Date

Sara Brunner
for Edward Nam
Acting Director
Air and Radiation Division

CERTIFICATE OF MAILING

I, Loretta Shaffer, certify that I sent a Finding of Violation, No. EPA-5-16-OH-16, by Certified Mail, Return Receipt Requested, to:

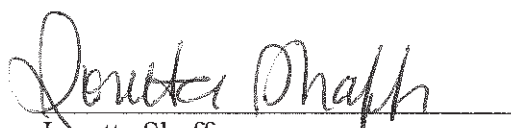
Heather McBurney, Environmental Manager
MarkWest Energy Partners L.P.
MarkWest Utica EMG, LLC
43050 Industrial Park Road
Cadiz, Ohio 43907

I also certify that I sent copies of the Finding of Violation by first-class mail to:

Bob Hodanbosi
Chief, Division of Air Pollution Control
Ohio Environmental Protection Agency
1800 WaterMark Drive
Columbus, Ohio 43266-1049

Melisa Witherspoon
APC Manager, Southeast District Office
Ohio Environmental Protection Agency
2195 Front Street
Logan, Ohio 43138

On the 8 day of September 2016.



Loretta Shaffer
Program Technician
AECAB, PAS

CERTIFIED MAIL RECEIPT NUMBER: 7009 1680 0000 7674 0838